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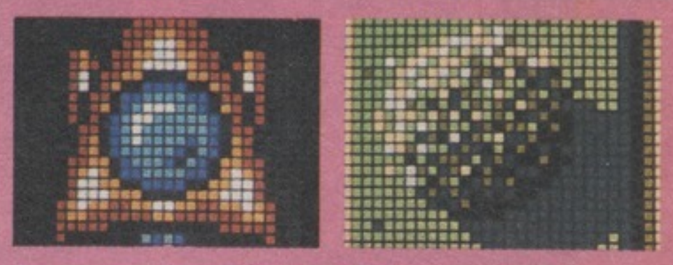
AMSTRAD IN PC SHOCK

Sugar: We're exchanging all hard disks – page 2

EXPRESS REVEALS THE BEST BUYS *page 15*

SHOWING OFF!

Archie A3000 officially launched *page 6*



CREATE YOUR OWN SHOOT-'EM-UP *page 8*

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VOUCHERS FREE INSIDE *page 43*

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- Carrier Command hits Spectrum
- World's best flight sim
- Free ST games
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AMSTRAD'S PC2000 HARD DISK SENSATION

Wholesale replacement to save image

Amstrad last week took the extraordinary decision to swap all the hard disks on its 286 and 386 machines in circulation for brand new units.

This "dramatic gesture" follows months of industry speculation concerning the performance and reliability of the top end PCs. Amstrad admits that the hard disk failure rate is "unacceptable" but says it is lower than industry rumours would suggest.

No 2286 or 2386 hard disk machines have been shipped by Amstrad to distributors and dealers since April. Amstrad engineers and technical staff from hard disk manufacturer Western Digital have been working to correct the faults.

Users who have bought either of the machines are being urged to call a special hotline. Amstrad has set up a 48 hour on-site maintenance arrangement with Dictaphone. Engineers from that company will visit owners and replace their machine's main system box containing the hard disk and its controller. Also, they will transfer all data from the old disk to the new free of charge.

• Hard facts: Action stations for PC2386

Amstrad's top end models have come under fire from users and the trade with reports of the hard drives seizing up.

They have also been criticised for being slow. A recent benchmark test measured an access speed of 100 milliseconds. Normally, 50 milliseconds is considered slow. But it is not yet clear whether the replacements will offer greater speed.

In an unusually long statement to the industry, Amstrad boss Alan Sugar acknowledged that there is a problem with the disks and expressed concern about the damage done to the perception of his company.

• Bitter pill for Sugar: "We have chosen to exchange all hard disk models and by doing so to restore the reputation which took us to PC prominence in Europe."

"The hard disk failure, whilst low, is unacceptable to us. But rumours in the market suggest wholesale failure and we cannot allow our reputation as suppliers of reliable equipment to be damaged," he said.

This decision has not been taken lightly. Amstrad launched the PC2000 range with the intention of establishing itself as a serious PC manufacturer. The firm was hoping to attract upmarket buyers looking for power, speed and reliability. However, as yet that has not happened with various problems holding up production and busting shipping deadlines.

Indeed, the Stock Exchange is extremely jittery about Amstrad with analysts downgrading profit predictions and citing the sluggish sales performance of the PC2000 range as the main reason.

"A dramatic gesture is now needed to overcome any suggestion that this company is failing in its duty to supply reliable products," said Sugar. He went on to compare this with his decision to fit the PC1512 models with a fan in 1986 after talk that the machines were overheating. "It did not overheat, but because people believed that it did we immediately fitted a fan to finish off that damaging rumour."

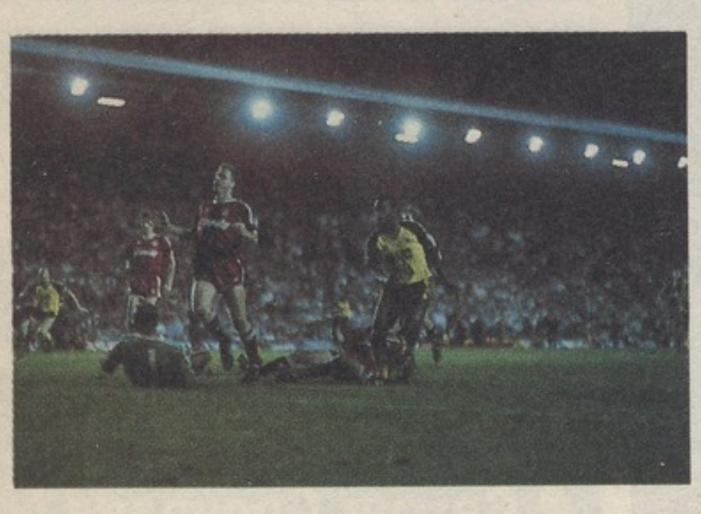
However, Amstrad clearly feels that this problem has more substance than the infamous fan fiasco. Then, Amstrad only fitted new machines with fans and it was quick to crack down on those who questioned the machine's performance. This time it has not been so confident.

A spokesman for the firm refused to speculate as to how much this will cost Amstrad. Nor would he reveal how many machines are involved. Whilst it will find this a serious embarrassment Amstrad hopes its decision will go down well in the corporate sector.

"We want to capture 30 to 40 per cent of the market for top range personal computers by next year," said Sugar. "I think we can do it."

Users who have experienced hard disk problems should call the hotline on 0926 429124.■

Zenith guns for Arsenal soccer showdown...



• Gunner Mickey Thomas at the zenith of his success

It's strange how football and computers seem to overlap so often.

Not only do computer gamers love soccer but so, apparently, do sober hardware manufacturers. PC firm Zenith has just decided to sponsor a big name match between English champs Arsenal and Argentine league winners Independiente.

The first Zenith Data Systems Challenge is due to kick off in Miami, Florida on August 6th. Says Gunners boss George Graham: "The Zenith Challenge will provide Arsenal with a wonderful opportunity to test its skills against talented overseas competition."

Already Commodore sponsors Chelsea and Amstrad was once close to tying up a deal with Spurs. Zenith manufactures a range of middle to high end PCs.■

Sticking its neck out

There was a time when a joystick was just a joystick. Nowadays designers are cramming more and more innovatory features into the humble waggler.

Spectravideo last week unveiled its gizmo laden new stick the Wizmaster. It looks more like a console than a joystick and sports a plethora of buttons, modes, levers and switches to give gamers the crucial advantage.

The firm is also planning to bring out an infra-red stick for the Nintendo. The Wizmaster itself is available for all major micros and costs £11.95. More on 0235 555455.■

• Weird waggler: Wizmaster

PC PRICES SLASHED IN AMSTRAD SPREE

Amstrad's aggressive week ended with the announcement that next September will see massive price cuts across its flagship range of 386 PCs.

Dealers were informed on Saturday morning that the top end 386 machine would be coming down by a staggering £700. Users planning to move up into the world of power computing will be able to pick up the entry level 386 for less than £2,000.

The 286 range is also coming down in price, although the reduction is not quite so dramatic. The entry level price stays at £999 whilst the top end PC with a 40 Mb hard disk and 14 inch colour monitor comes down by £200 to £1499.

Amstrad is clearly tired of trying to muscle in with manufacturers of expensive machines. The firm is happiest when it's selling kit which is really affordable.

Amstrad is pitching this as a full relaunch rather than a simple price cutting exercise. It says it is proud to be presenting a sub £2,000 386 which offers 4 Mb of on board RAM, VGA graphics and a 65 Mb hard disk.

Less ambitious buyers will be able to pick up a 286 PC with a mono monitor and hard drive for just £1199.

Buyers will also be provided with a full one year on-site warranty with problems being fixed by Dictaphone within 48 hours of the request being made.

PC Show 1989: Check your diary

The build up for British computing's annual jamboree, the PC Show, is beginning already with promises of a great event for all users.

As well as the big name manufacturers, games software houses and bargain brigades organiser Montbuild is promising an extra large helping of business products.

High tech companies such as Hewlett Packard will be there for the first time as well as a band of PC Show newcomers from the US and the Far East. So even if you're not in the market to buy a £20,000 computer you can always have a good fiddle with the state of the art in professional computing.

No doubt 386 PCs will be everywhere with all the big names making a play for your attentions. Amstrad, of course, will be there along with the likes of Walters, Samsung, Commodore, Olivetti and Atari.

Montbuild is expecting an even bigger crowd then the 100,000 plus which descended on Earls Court last September. It's probably a good idea to check your diary for September 30th-October 1st.

Thunderbirds are go!

Cult puppeteer Gerry Anderson (right) turned up at Oxford Street's Virgin Megastore recently to launch the game version of his creation *Thunderbirds*.

Grandslam boss Stephen Hall (also pictured) invited the man along to sign posters and copies of the game (available on 8-bit and 16-bit. The shop's sprawling games section was cram packed with Anderson's legions of fanatics hooked to the likes of *Captain Scarlet*, *Stingray* and *Fireball XL5*.

• Pulling strings: Hall and Anderson

Pictures on a PC

Digitised graphics on the PC don't come cheap – at least not until now.

Leading gadgeteer Romantic Robot is working on a real time video digitiser which should cost less than £300, as against a current typical price of over £1000.

A video digitiser allows the user to port video pictures into a computer for applications such as DTP. Despite some development problems, Romantic Robot (01 200 8870) is confident its new device will be out by Christmas.

In at the DTP end

One of the biggest problems with getting into desktop publishing is the baffling amount of jargon and the huge range of options.

To try to dispel the fog a special beginners seminar has been introduced into the 1989 Desktop Publishing Show (London Arena 4-6 October).

Experts in high end and home DTP will be delivering a series of lectures on the merits and pitfalls of being your own publisher. And, promise the organisers, there'll be no baffling technobabble to grapple with.

The registration fee is £80 and you can find out more on 0372 376161.

SHOOT FROM THE LIP

Our revelations concerning copying devices and the difficulties the law is having banning them prompted some interesting perspectives.

● *"I want these things banned. They are not good for the industry. The programmers, publishers, distributors, dealers and magazines all suffer. All that happens is the end user gets free software..."*
Digital Integration's Dave Marshall

● *"Publishers say they are losing millions but that's rubbish. They haven't lost anything because it's money they were never going to get anyway. People can only spend a certain amount of software whatever happens"*
Evesham Micros Richard Austin (which recently introduced the Mass Duplicator for the ST)

● *"They've got to be banned. Either that or the manufacturers have to behave more responsibly."*
Hewson boss Andrew Hewson

● *"I would have to be pretty sure that we will not be sued if we carry on selling the Multiface. We want to do the honourable thing."*
Romantic Robot's Alexander Goldsheider

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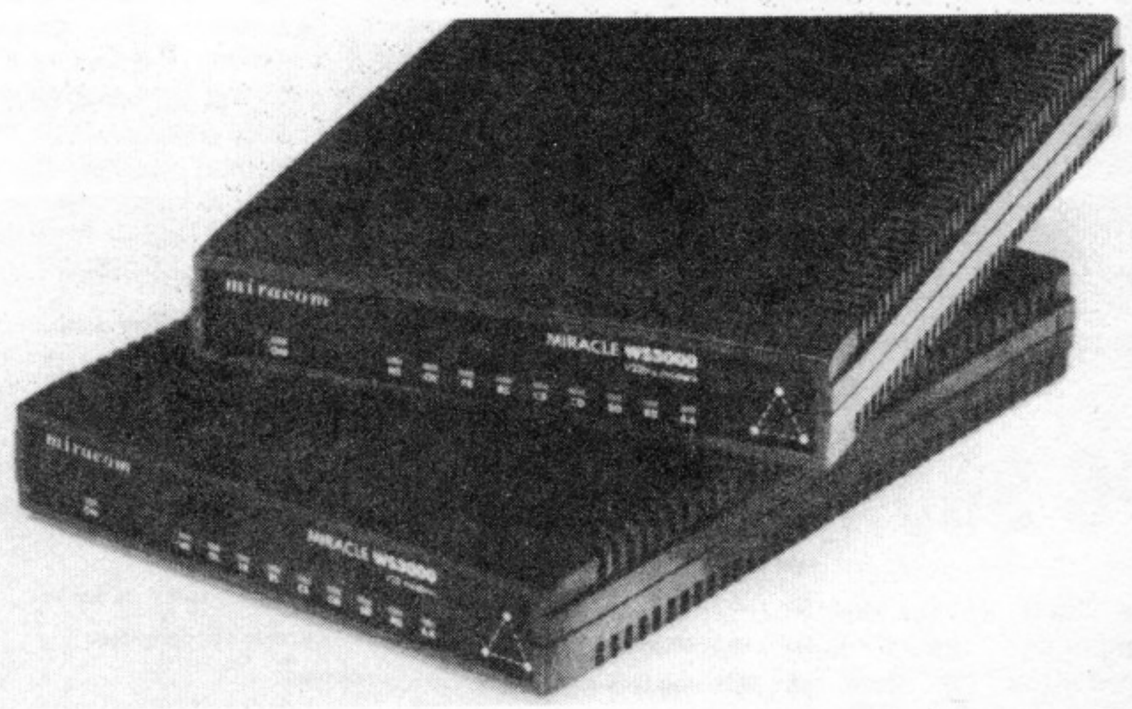
TOP MODEM FIRM HITS HARD TIMES

High profile modem manufacturer Miracom (formerly Miracle) has run into serious trouble, with receivers currently in control at the firm's Ipswich office. The company's main core modem business is up for sale.

Miracom had attempted to establish itself in the local area networking arena – a venture which has proved to be a costly failure.

The company has been at the forefront of comms for the past seven years. Its WS 3000 modem was the best selling model for much of the last few years. And according to market researcher Romtec the company still holds the second biggest share of the modem market.



• WS 3000: Do you like it enough to buy the company?

However, costly ventures into new areas have proved "a financial embarrassment". Mark Shires of receivers Cork Gully told *Express*: "The company is currently trading as normal with a view to seeking a buyer and selling the core business as a going concern. We feel that the core modem business is viable."

Miracom changed its name from Miracle last year in order to establish "a higher profile" for ambitious leaps upmarket.■

Gallic crooks grab games

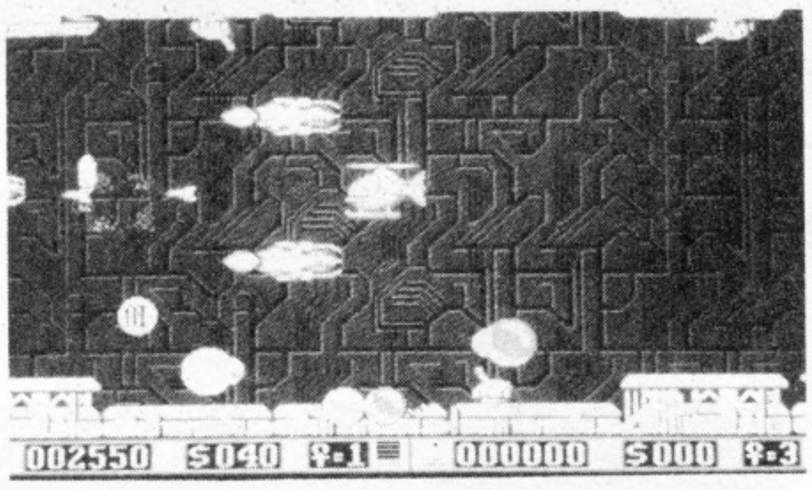
A gang of French villians surprised the gendarmes when they hijacked a lorry and nicked thousands of computer games.

The crooks broke into the lorry near Paris and took off with boxes full of Psygnosis' *Blood Money* leaving behind thousands of pounds worth of valuable cigarette lighters and clocks.

The lorry was on its way to make a delivery to a large French distributor. Police have yet to track the game thieves down and it is unclear why they nicked a load of games and left the more mainstream goodies behind.

"We realised that *Blood Money* was a game that most people want to get their hands on – but we never figured they'd go to these lengths to get copies," said Psygnosis' Jonathon Ellis.

"Now we have visions of the French criminal community huddled over their Amigas in rooms filled with smoke from the inevitable Gauloises, getting their kicks out of *Blood Money*."■



COMMENT

Hard but fair

There's something very British about Amstrad: smug when they're on top, pigheaded and stubborn when they're wrong, but just great in a crisis.

The problems with hard disks on their PC2000s must have been causing multiple migraines at Brentwood. Misgivings over the quality of the drives have hit sales and Amstrad's efforts to establish itself as maker of serious machines and not just as well-packaged cheapo bundles have, like the hard disks, gone in ever decreasing circles and ground to a halt – no PC2286s or PC2386s have been shifted from the warehouses since April.

But Amstrad's no-nonsense approach to resolving the problem has been commendable. Exchanging all the hard disks on the 2286s and 2386s – a very costly operation in terms of time and money, and most importantly lost reputation – would have been enough to satisfy most.

But the follow-up move is typical of Amstrad's relentless marketing aggression and persistence. The drastic price slashing on the 2286 and 2386 machines, the latter available for under £2,000 from September, will increase the pressure on its competitors; however hot it may feel at the moment, the market will only get hotter in the rush for the 2286 and 2386 entry level buyer. And now it will be the turn of some Amstrad's competitors to do the sweating.

Skweeky unclean

Perhaps there are parallels to be drawn between the recent spate of poisoned baked beans, baby food and crisps, and the cracked version of Skweek which had had foul language inserted, and was pulled off WH Smith's shelves. Will the extortionist of the future demand money to stop them contaminating games with Satanic messages, bad language, 'spiced up' graphics and so on?

It will be no joke for software houses if it happens. It is a good time for them all to review their duplicating and distribution procedures and learn any lessons that can be learned from the Skweek saga.

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© Future Publishing Ltd
4 QUEEN ST, BATH, BA1 1EJ
TEL: 0225 446034 • FAX: 0225 446019 Printed by Redwood Web Offset, Trowbridge, Wilts
Distributed by Comag, West Drayton, Middx

SNIPPETS • SNIPPETS • SNIPPETS

• A line up of old Gremlin games are to appear at budget prices next month courtesy of new budget label Cobra. These will include *Masters of the Universe*, *Northstar* and *MASK*. They'll all cost £2.99...

• Tandy is planning to launch a low cost portable into the UK early next year. It is understood to be a sub £1,000 Toshiba T1000 clone...

• As first predicted in *Express* 24, Activision has lost the UK rights to Microlllusions products such as the impressive *Photon Paint II*. It's now available from Microlllusions Europe on 0480 496497...

• King Edward VI Handsworth school in Birmingham has won a copy of Virgin's interactive video polar expedition program in a special competition. The Beeb program features film of Sir Ranulph Fiennes trip to the North Pole and gives students the chance to make "on the spot" decisions.

Ringing the change

***London STD* is a software package designed to be used once and thrown away.**

Next May all London telephone codes are to be changed from 01 to 071 or 081. This means thousands of databases of telephone numbers will be outdated.

Instead of laboriously changing all the numbers *London STD* will do it automatically. It's available on the PC from Qualsoft for £10. The company (until next May) is on 01 724 9053 .■

Mac mad

During the three months preceding June 30th Apple sold three quarters of a billion pounds worth of kit. That's compared to £602 million for the same period in 1988.

Profits for the manufacturer of the Macintosh range came in at a tidy £95.5 million.■

Compaq's mystery pact with IBM

Fierce rivals IBM and Compaq astonished the PC industry last week by signing an agreement in which each gains rights to the other's technology.

The agreement, secretly negotiated over the last two years, means that Compaq will be able to build computers based on IBM's patented Micro Channel Architecture (MCA), a standard which until now it has strongly opposed.

As part of the deal Compaq will pay IBM substantial licensing fees every year until 1994 – some are suggesting that the official wording of the deal disguises the fact that Compaq has simply been hauled up to pay for the use of IBM technology in the PCs the firm has sold in the past.

Compaq says it has no immediate plans to produce an MCA computer and will continue to back the rival EISA standard set up by leading PC clone manufacturers to offer easier upgrades for existing PC owners. But the agreement gives the company the option of backing MCA if the standard becomes dominant.

Theoretically the agreement also means IBM could launch an EISA machine and some industry observers believe that both companies have decided to hedge their bets.

IBM uses MCA technology in its PS/2 computers. The system's chief drawback is that it is not compatible with existing PC add-on cards, a problem avoided by EISA. However the first EISA computers are not due for release until later this year.

FOUL MOUTHED SKWEEK FALLS FROM GRACE

Major High Street store W H Smiths has taken all copies of US Gold's *Skweek* off the shelves after it was found that some copies of the game contain foul language.

Both Gold and Smiths are reluctant to talk about this embarrassing situation although it is believed that the bogus copies of the game are the work of pranksters. Seemingly, they have cracked into the game's code, tampered with it, and distributed a number of copies.

Quite how these games slipped into mainstream selling channels is a complete mystery.

The game *Skweek* revolves around a particularly "cute" character which communicates through speech bubbles. On certain screens these speech bubbles contain four-letter expletives.

One software salesman at a W H Smiths store found out about the tampered-with games when he loaded one up for a routine check. It is understood that a small number of rogue copies have slipped through to the general public.

• Skweek: Taken off Smiths shelves

A spokesman for Smiths would only say that it could not risk selling games such as this to the general public. "It's not something we want to be associated with," he said. A baffled US Gold manager said he had not even heard of the Smiths decision or of the unwanted versions of *Skweek*.

Tally ho

Mirrorsoft's old fighter pilot game *Spitfire 40* is back at a new price.

Alternative has launched the game at £2.99 for those 8-bit owners hoping to simulate the exploits of "the few". Gamers who fork out for the game will get the chance to chase Messerschmitts all over the south of England.

• Spitfire 40: Flying through

Alternative is well known for picking up games from other publishers and making them available at budget prices. *Spitfire 40* is available on Speccy, C64 and CPC. More on 0977 795544..

Students snub computing jobs

Less than four per cent of university students see computing as an ideal career, according to a study made by the Post Office.

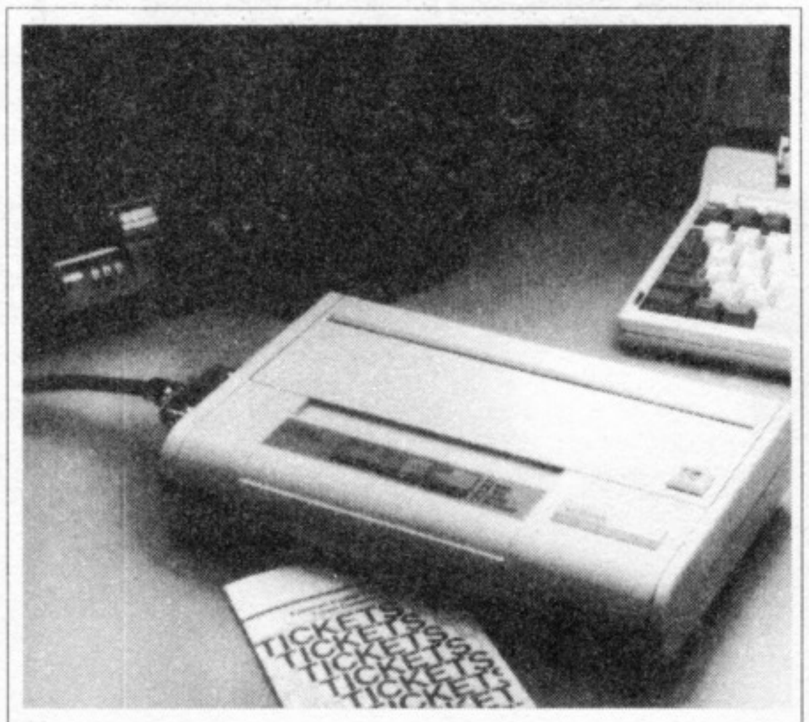
The survey of more than 1,000 students found that only 17 per cent had even bothered to consider a career in the computer industry.

And women are still uninterested in the big money opportunities computing can offer as a career. It was placed second least popular amongst women behind manufacturing.

Computing as a university course is still high on the list. when asked what would be the most valuable qualification for a business career computer science came third after business studies and accountancy.

The computer industry as a whole is worried that it is not attracting enough talent at the analyst and programming end. The Women Into IT Campaign estimates that up to 50,000 Information Technology jobs are currently unfilled.

The campaign wants to woo women who have dropped out of their careers for family reasons or want to make a fresh start in a new area. It is being claimed that there are 20,000 mothers with good computing credentials but who have left the industry..



This neat little number is the latest in printing on the move from Kodak.

Called the Diconix 150 Plus, it weighs less than four pounds with batteries but costs a meaty £350. It's a direct upgrade from the original 150 but is said to be 20 per cent faster and boasts a draft speed of 180 characters per second.

Kodak points out that portable computing is where the action is, and is hoping to catch the attention of trendy business types who don't mind having to carry around even more electronic gadgetry than they do already.

TOP 20 *Full Price* GAMES

1	**Robocop** OCEAN *Spectrum, C64, CPC, ST, Amiga, Others*	1
2	**Silkworm** VIRGIN *Spec, C64, CPC, ST, Amiga*	3
3	**Dragon Ninja** OCEAN *Spectrum, C64, CPC, ST, Amiga*	7
4	**Forgotten Worlds** US GOLD *Spectrum, C64, CPC, ST, Amiga, Others*	2
5	**Run the Gauntlet** OCEAN *Spectrum, C64, CPC, ST, Amiga*	8
6	**Emlyn Hughes** AUDIOGENIC *Spectrum, C64, CPC*	4
7	**Kenny Dalglish** COGNITO *Spectrum, C64, CPC, ST, Amiga*	5
8	**Microprose Soccer** MICROPROSE *Spectrum, C64, CPC, ST, Amiga*	10
9	**Operation Wolf** OCEAN *Spectrum, C64, CPC, ST, Amiga*	11
10	**Kick Off** ANCO *C64, ST, Amiga, Others*	6
11	**Crazy Cars II** TITUS *Spectrum, CPC, ST, Amiga, Others*	9
12	**Red Heat** OCEAN *Spectrum, C64, CPC, ST*	RE
13	**Football Manager 2** ADDICTIVE *Spectrum, C64, CPC, ST, Amiga, Others*	20
14	**In Crowd** OCEAN *Spectrum, C64, CPC*	14
15	**Arcade Muscle** US GOLD *Spectrum, C64, CPC*	17
16	**Double Dragon** MELBOURNE HOUSE *Spec, C64, CPC, ST, Amiga, Others*	18
17	**Renegade 3** IMAGINE *Spectrum, C64, CPC*	13
18	**Running Man** GRAND SLAM *Spectrum, C64, CPC, ST, Amiga*	15
19	**Rampage** SEGA *Sega*	RE
20	**Populous** ELECTRONIC ARTS *ST, Amiga*	12

TOP TEN *Budget* GAMES

1	**Green Beret** HIT SQUAD *Spec, C64, CPC, Others*	NE
2	**Daley Thompson** HIT SQUAD *Spec, C64, CPC, Others*	3
3	**Barry McGuigan** MASTERTRONIC *Spec, C64, CPC, Others*	14
4	**Enduro Racer** HIT SQUAD *Spec, C64, CPC, ST, Others*	1
5	**Wolf Pack** BLUE RIBBON *Spectrum, C64, CPC*	11
6	**Yie Ar Kung Fu** HIT SQUAD *Spectrum, C64, CPC, Others*	NE
7	**Gauntlet 2** KIXX *Spectrum, C64, CPC, ST, Amiga*	10
8	**Saboteur 2** ENCORE *Spectrum, C64, CPC, ST, Others*	15
9	**MiG 29** CODE MASTERS *Spectrum, C64, CPC*	7
10	**Game Over** ALTERNATIVE *Spectrum, C64, CPC, Others*	RE

RE re-entry · NE new entry · Last week's positions \
Compiled by Gallup

The charts shown are based on the Open Market, that is, retailers who stock a broad range of products. All charts shown are copyright of Gallup.

TIME FOR LAUNCH

• SIMON WILLIAMS reports on last weekend's Acorn User Show at Alexandra Palace

One of the better launch lunches preceded Acorn's official 'Coming Out' for the A3000 Archimedes, which was pushed very hard from the start as the new BBC Micro. To support this stance, A triumvirate of bigwigs on the launch plinth included Harvey Coleman from Acorn and James Arnold-Baker from the Beeb. The link man was Magnus Magnusson who acted the informed layman and asked all the pertinent questions about the new machine.

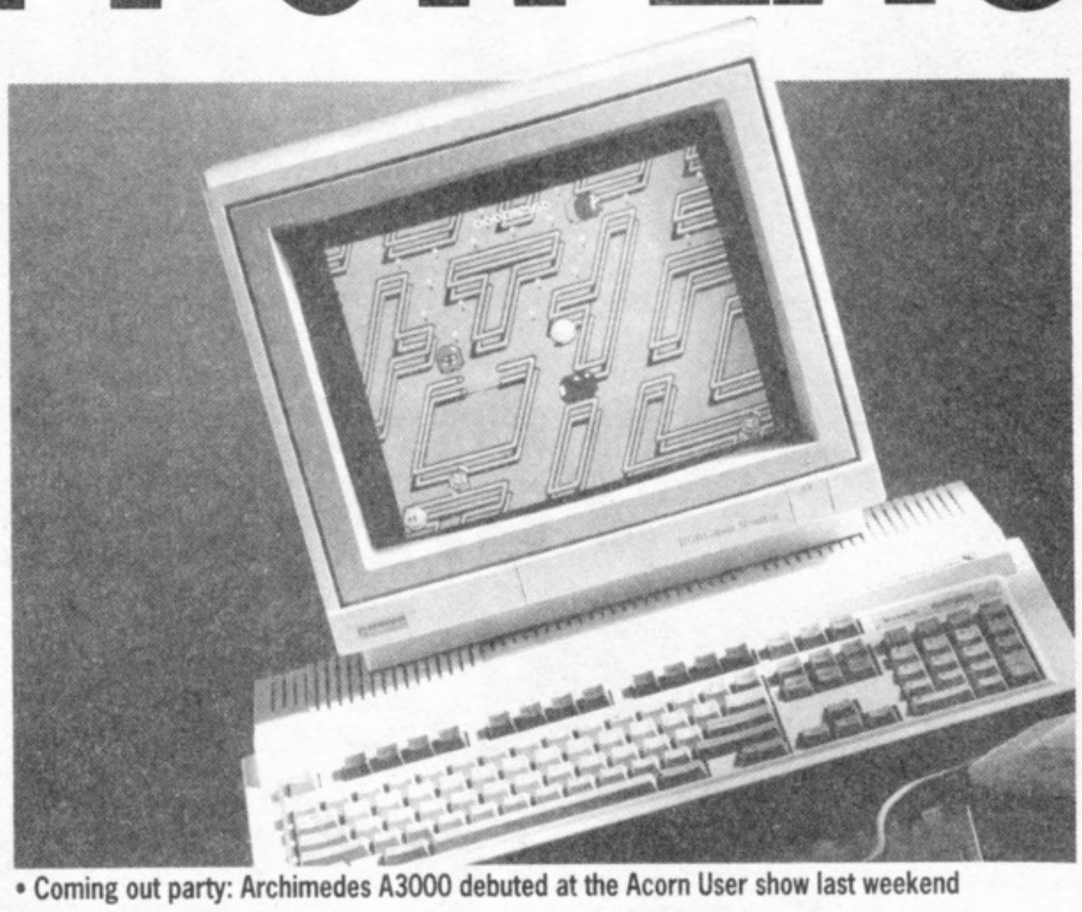
Several Archimedes industry notables were there, full of the joys of summer – and Acorn's red wine. The general view was that the A3000 was a 'good thing' and would at last bring Archimedes computing to the masses.

This was the first public showing for the smallest Archie and it was much in evidence on the Pyramid-topped Acorn stand, including the inevitable laser ads and telephonist-style demonstrations from Acorn reps in headsets. Judging by the number of punters who flocked around to see, even at 3p.m. on a Friday afternoon – which seems a funny time to start a show – they could enjoy a good few sales.

It's showtime, folks

It's nice to attend a computer show where you can actually move around the hall without having to knee your way past fifteen rabid bargain hunters and trip over a security guard engrossed in a phone call to his mother.

The Acorn Show was remarkable in both respects, as there was plenty of space between the stands and few 18 stone thuggees in residence. Instead, the stands were few on the ground but well-stocked. There were plenty of new products and just as many keen purveyors happy to explain the details of each and every one.



• Coming out party: Archimedes A3000 debuted at the Acorn User show last weekend

Perhaps the hottest product almost-at-the-show was *Impressions* from Computer Concepts. This is the (very) long-awaited DTP program which really does look as if it might become available within the next month, as Director Charles Moir claimed. The latest hold-up has been in obtaining the rescaleable fonts from Acorn which make all the difference to the quality of screen and print output. They work like PostScript fonts in all respects except the interminable waiting. The brochure for *Impression* was produced with the software, and is a good example of clean design. Although the software at launch won't handle colour separations (the colour in the manual had to be pasted in, Moir admitted), it's lined up for a later version of the program and what is in there looks very impressive.

Acorn

• Magnus Magnusson led a gaggle of dignitaries who were there to launch the new Archie

Vintage port

Acorn were showing their DTP system too, which is based on a port of *Timeworks* DTP, already available on the PC and ST. This was in a more finished state (i.e. you could buy one) but if the brochures are accurate (and aren't they always?) the CC product should win hands down on functionality.

Products other than DTPs for the Archie included *Armadeus* (sic) from Clares, which is a high function sound sampler with digitising software, *Atalier* from Minerva, which is one of the first multi-tasking paint packages for the machine, and *Euclid*, a 3D modelling package rewritten by Ace Computing for full RISC OS compatibility.

The Novelty Product of the Show award must go to Data Design's *Designer Castles*, which lets you design a play castle yourself on-screen, print it out, glue it to a card backing – here's one I prepared earlier – and give it to the kids to play in with their men-at-arms.

The show is definitely swinging away from the earlier BBC Micro, Master and Master Compact products, and new software for these was thin on the ground. HS Software was selling its range of educational titles for the BBC range and these are designed to run on any Acorn machine. The usual stands selling cheap disk boxes, labels, printers stands and other paraphernalia seemed to be doing well, and are likely to consider the show good value for the same reasons as always.

Term time

Whether the extra crowds were there to see the new Archie, or because there's a resurgence of interest heralding a renaissance of the Acorn machines, is hard to say. The new Archie is certainly better priced than previous efforts, and if you consider its spec, it offers a lot more than the ST and Amiga. It's also true to say that in 'real terms', as the politicians would say, the new BBC Micro is no more expensive than the first one was when launched in 1981.

Nevertheless, all the other micros have fallen in 'real terms' and offer a lot more than the BBC, too. The A3000 will have to prove itself as a mainstream home/small business micro. Acorn has already proved itself in the education area, with over 60% of micros bought last year being theirs. Speaking to a few punters at the show revealed that many of them aspire to the new machine in much the same way I aspire to a £30 million NCube (*Express* 35) though the price is a little out of my reach.

Acorn is determined to retain its position as the top-of-the-range home machine. It already has the spec to do it – a pity it thinks it needs the price differential as well. ●

The prize guy

• Name? Stephen Hiew. Occupation? Doctor. And specialist subject? The Archimedes A3000 he's just won in the *Express* competition

The Express A3000 competition was duly judged and and a panic then ensued to reach the lucky winner in time to get him to the Acorn stand for the presentation.

As luck would have it, Dr Stephen Hiew, a GP from North London, was going to the show anyway. Slipping in to pick up his prize before afternoon surgery, Stephen had time to say how much he liked the mag, particularly the humour, and to let on that he already has a couple of Spectrums and an Amiga to his name.

He intends to use the Archie mainly for word processing and DTP, an interest which has been prompted by the extra work needed for the National Health Service changes.

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THE GAME BUILDER

Outlaw has finally finished tinkering with the Amiga version of* Shoot-'Em-Up Construction Kit, *announced as virtually complete well over six months ago. At last, a review of the production version can be written. Graeme Kidd is our man on the spot...

While the original *SEUCK* approach to building games hasn't been changed, the months between announcement and final mastering allowed a thorough revamp of the code.

So what does the finished Amiga *SEUCK* offer? The ability to produce an endless stream of one or two-player shoot-'em-ups, where the action can take place against vertically-scrolling or static backgrounds. The package contains all that's needed to design sprites, build backgrounds, create animations, and assign bullets, explosions and sound effects to player and enemy sprites. A respectable wodge of sound samples is included, and effects may be used to add audio appeal to a creation's visuals ('external' samples can also be used in *SEUCK*-ed games, providing they're collected in IFF format). Then the final gloss can be given to the product: an IFF picture file can be used as a loading screen, but you need to go to a package such as *DPaint* to produce the artwork. The files needed to make the finished product a stand-alone game are provided, and Outlaw is happy for you to sell or give away your original *SEUCK*-ed software.

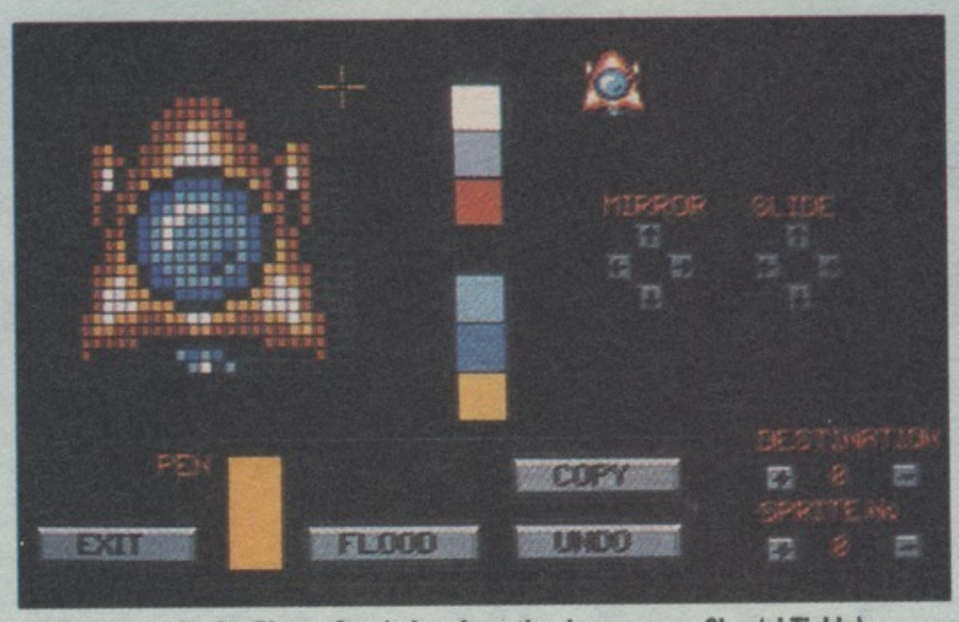
All this, accessed from handy point-and-click menus: there's no need for a byte of machine code, let alone the huge, indigestible mouthfuls usually involved in programming games. Providing some effort is put into designing a game to take advantage of *SEUCK*'s features, quite respectable budget-standard titles can be created on the utility. Sadly, *SEUCK* is not likely to be the gateway to programming fame and fortune. Andrew Wright, the man in charge of Mastertronic's budget labels is certain he won't be buying *SEUCK*-ed Amiga games: "We've never taken a C64 *SEUCK* game – although some of the submissions have been very good, they have little commercial value as far as we're concerned. It's rather like adventures programmed in *GAC*; the buyer feels he could have written the game himself." You could use *SEUCK* to storyboard ideas, though...

As a fun utility for exploring the techniques of game design and as a tool for devising your own, *SEUCK* scores. It's powerful, well thought-out and comes with a pedigree earned on the C64. ST owners needn't feel left out of the fun: Outlaw's boss Pete Stone promises them a version this autumn.

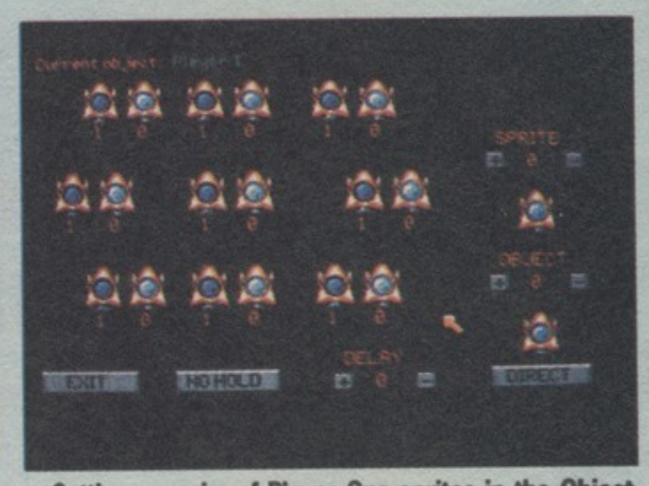
★★★★★

On the building site...

Implementing a game design in *SEUCK* is all point and click – nested blue menus lead to activity screens where just about everything can be achieved by pressing buttons with the screen pointer. Five basic elements make up a *SEUCK*-ed game: player and enemy objects, the background, sound, and the gameplay. A little confusingly, *SEUCK* refers to single frames of animation as 'sprites', and calls a series of such sprites linked in an animation sequence an 'object' (which most folks think of as a sprite, but there you go.)



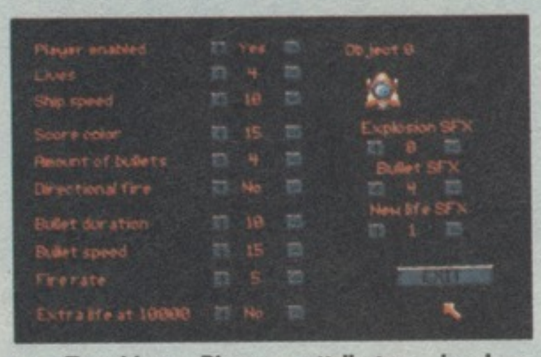
• Editing a sprite for Player One (taken from the demo game, Slap 'n' Tickle)



• Setting up pairs of Player One sprites in the Object Editor to provide two-frame animations that are activated by the eight joystick positions.

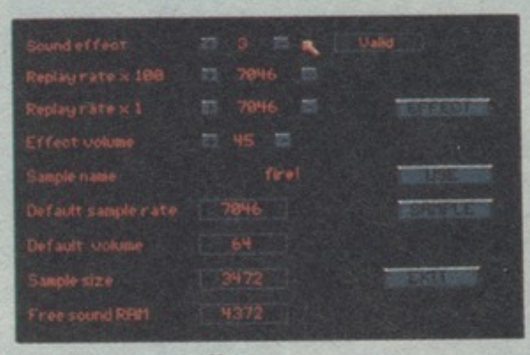
1 MAKING THINGS MOVE You have to start somewhere, so why not begin in the sprite editor? Any 8 of the Amiga's 4,096 possible colours can be used as a palette for sprite creation, but the palette applies to ALL sprites in your game, so choose them with care. Then it's a matter of clicking on a colour in the palette and painting pixels on a 24 x 24 grid.

2 Individual sprites can then be linked together into animation sequences – a group of linked sprites is known as an object. Objects, which are all identified by numbers, fall into five categories under the SEUCK system: Player One, Player Two, Enemies, Explosions or Bullets, and the way they are combined and linked gives rise to the gameplay.



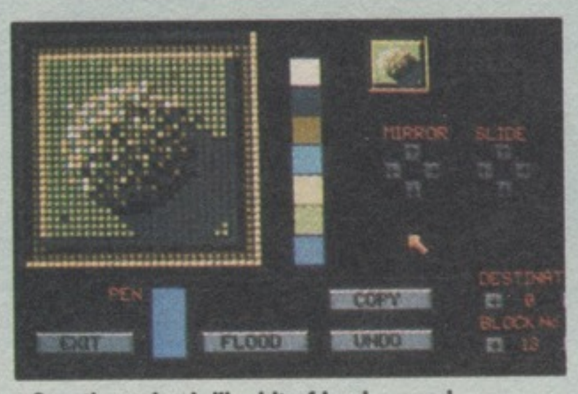
• Tweaking Player attributes involves assigning extra lives, sound effects, fire directions and fire rates.

3 Players and Enemies can be assigned attributes which govern how they behave during the game. Options for the Players are fairly straightforward, but enemies can be made invisible (used to make Players collide with the background), and can be static or move around according to pre-determined patterns. Assigning attributes and limitations to Players and Enemies is where the core of the gameplay is applied in *Shoot-'Em-Up Construction Kit*.



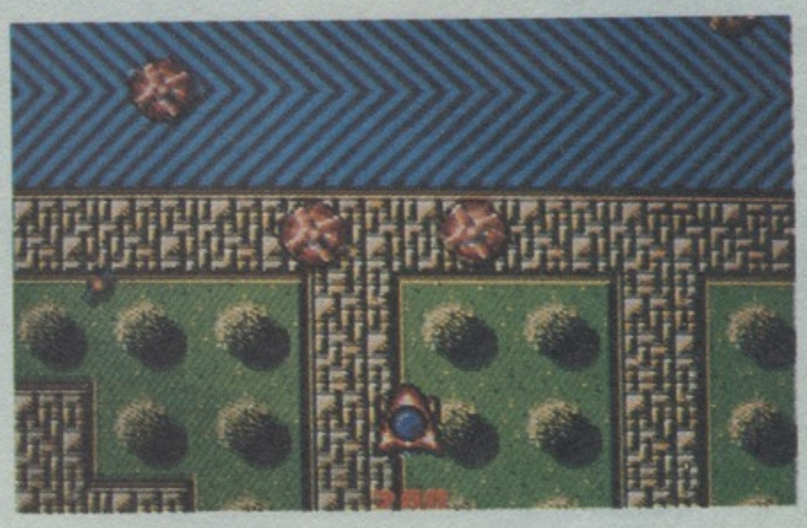
• Editing sound effects

4 MAKING NOISES There's a limited amount of space allocated in a SEUCK-ed game for sound, and the sound control panel allows you to make the most of it. Replaying the same sound at different speeds produces completely different effects, thus helping you to economise on that precious storage space.



• Creating a bush-like bit of background

5 Providing the Background Blocks are the basic units used to create backgrounds. They are created in a version of the sprite editor that allows a further eight colours to used in a palette, and are then assembled into a giant map in another editor. Chunks of the map can then be assigned to levels in your game.



6 AMAZE YOUR FRIENDS With a bit of playtesting and fine-tuning, the job's done. Copy all the right files onto a blank disk, scurry off to your favourite paint package to create a loading screen and voila! A stand-alone gem, sparkling in the firmament of entertainment software. And it was all your own work.

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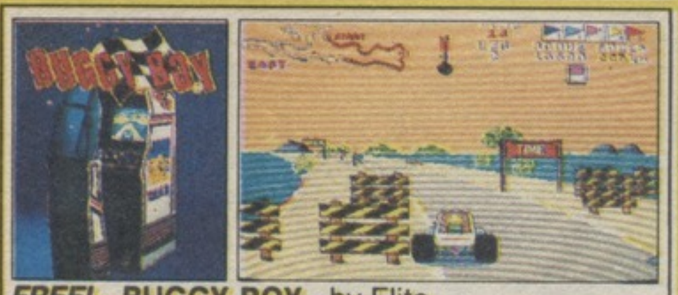

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Top Ten time!

More of *Express* readers' most hated things about computing. Think they've got it wrong? Tell us! Send your personal top ten to: **Top Ten, New Computer Express, 4 Queen St, Bath BA1 1EJ**.

The prize for the best ten hates was a close thing, but Steven Mercer wins a piece of software for his machine (if he writes in and tells us what he owns) for his selection of punter's gripes...

I KNOW WHAT YOU MEAN

MYSTERY PRIZE WINNER

1 Advertisements which preface an astronomical price tag with the word "only".
2 Computer shops where you have to watch the staff play games for 10 minutes before anyone deigns to notice you.
3 Companies which advertise printers for £20 less than anyone else, and then charge £20 for the leads.
4 AmigaDos in its entirety, always assuming that it has one.
5 Computer elitists who sneer at BASIC, beginners and people who can't afford hard disks.
6 Computer jargon – license to bull****
7 Anyone too stupid to realise that any computer is only as good or bad as the software available for it.
8 Companies which advertise cartridges to copy protected software, and then "strongly condemn" software piracy.
9 Those silly plots which game writers "invent" to disguise the fact that it's just one more scrolling shoot/ beat 'em up.
10 Companies which advertise prices excluding VAT in huge type, with the actual price in the tiniest type available, to make punters think they're getting a bargain.
Stephen Mercer, Shaftesbury, Dorset

● ***Ah, there'll be a lot of us nodding our heads in sympathy out here. How about the top ten moans against customers from a mail order house or software shop to balance things up?***

• Some computer shops are good because they let you play games for hours and hours. All you have to do is get a job as an assistant there first, says Stephen Mercer

IT'S NOT CRICKET

1 Smug, virus-writing dop-heads who write to computer magazines boasting of their "achievements". Best not publish them – it only encourages others!
2 *Popular Computing Weekly*.
3 The nth shoot-'em-up release featuring DAZZLING GRAPHICS and SCINTILLATING SOUND – but they forget to tell you about the mindless, monotonous, repetitious, treadmilling, disillusioning, lamentable, uninspiring and unpraiseworthy gameplay. Nuff said.
4 Exorbitant entrance prices to a certain computer show held in a certain hotel in Hammersmith.
5 The lack of good wargames software for the Amiga. (I've got the historic backdrops and game mechanisms if you've got the m/code programming skills – OK, ya?)
6 The lack of any decent cricket game for the Amiga (Tynesoft don't bother please).
7 Jokers like Paul Quinn (*Express* 34) criticising the Amiga without any valid reason, so falling prey to the "my computer's better than yours" sort of mentality.
8 People who answer Yo! instead of saying Yes, Yuh, Yeah or Ya. (I knew someone who did and he had a computer – does that count?)
9 Hype, bilge and bull over games consoles. OK, OK, so several hundred out of ten for game graphics and sound, but minus several million out of ten for cart prices, no save-play and versatility.
10 People who write in with their own ten worst aspects of computing (excluding people like me).
Don Howard, Croxley Green, Herts

● ***A decent cricket game on the Amiga: there's a thought. How about getting the speech synthesiser to do Richie Benaud commentaries – "trouble here," "that's the best shot of the day" and so on?***

VAT'S VAT

10 Sending a cheque to a mail order firm only to realise that you forgot to add VAT to the total.
9 The large amount of software for the Dragon!
8 The price of software in general.
7 The excellent sound on the ST (ha ha!)
6 Software firms who rely solely on films/ TV tie-ins.
5 Mail order companies who advertise "Limited Period Only" sales that last for about six months.
4 The high prices on a good wp/paint package etc for 16-bit computers.
3 Software houses that don't reply to your letters (even with an SAE).
2 Port overs.
1 Hackers who put viruses on disks and then distribute them.
D D Ralph, Merthyr Tydfil, Mid Glamorgan

● ***Regarding point 5, I'm sure most of us are quite happy if a mail order company actually lasts six months.***

AND FOR A CHANGE...

My top ten favourite things about computing:
1 *LocoScript* and *LocoFile*
2 The Atari ST
3 The Commodore Amiga. (I think I'm unique in that I like the ST and Amiga)
4 The Apple Macintosh II
5 *MacAuthor*, the best wp ever
6 Naturally, *New Computer Express*
7 *8000 Plus*
8 The PCW 9512 (my computer)
10 *Elite* for the BBC
Timothy Gowen, Diss, Norfolk

● ***Having edited both the magazines you mention, I can only commend you on your excellent taste.***

EXPRESS MAIL

Dear Reader

More pages packed with another selection from our postbag and Rob Ainsley's replies. Have you got something to say? Make your voice heard in computing's liveliest letters page! Send your contributions to:
Express Mail, 4 Queen Street, Bath, Avon BA1 1EJ
PS. Sorry, we just don't have the time to give personal replies, whether you include an SAE or not. We're too busy putting Express together!

THIS IS THE REAL WORLD

I must echo the sentiments expressed by Gordan Keenan (*Express* 36). At present I am a sixth form student trying desperately to find a summer job. The reason is so that I can purchase an ST. If I buy a 1040 it will take most, if not all of my earnings. It is obvious that the blase statement "if you can afford the computer, you can afford the software" is not applicable. Anyone who still believes this after what they have heard recently deserves a swift kick up the arse to wake them up to the real world.
S J Phillips, Bebington, Wirral

● ***Well, as someone who's currently moving house, I'd advise you to become a solicitor or an estate agent on leaving your sixth form. Soon you'll have no problem buying all the software you want.***
As for a bit of practical help now, there's plenty of PD available for the ST so you can get a lot of good software quite cheaply (see Express passim, and the Budgie feature this month).

GIVE TO THE RICH

After reading Gordon Keenan's letter (*Express* 36) which complained that he could not afford software and which attacked programmer Gary Partis (*Express* 36) for complaining that piracy might endanger his chances of earning £30,000, I could not believe you had made it letter of the month. Did you feel sorry for him or something?

What Mr Partis's letter boiled down to was that if the public wanted cheap software that was not worth pirating then that is what they can have. He was also trying to say that the better a game is the more it is pirated, so writing good games are not necessarily worth it any more, so it is the public's fault when a programmer churns out expensive crap?

Mr Keenan obviously doesn't realise that to become a programmer it takes a lot of hard work, and so when some pirate starts pinching his profits it is obviously bound to annoy him. Mr Keenan could also be earning this astounding wage too if he had made something of himself, which he obviously has not.

Express was wrong in saying that Mr Partis should be happy with what he's got, which was basically the reply *Express* gave. Why shouldn't somebody be given full credit for what they have done. I suggest you think a bit more *Express* before you give letter of the week to somebody.

Despite my severe criticism, keep up the good magazine.
S Williams, Reading, Berks

● ***Yeah, quite right, 'e'd 'a made 'imself a bit 'o money if 'e was worf summing, old Gordon, would'n'e? Must be a nurse or a teacher or a signalman or summing like vat, you know, people wot don't do nuffink and deserve ter get paid nuffink an' are always on strike anyway. I mean, anyone wot writes shoot-'em-ups an's on firty grand a year, well vey deserve it dun't vey? Anyone can work a signal or frow chalk at kids or give marf to marf but only someone wiv a bit upstairs can write a game, can't vey? Vey've made summing of 'emselves, 'a'n't'vey? Stands ter reason dunnit narmean gorblimey strike a light Arsenal dun well straight up two pints of lager an' a packet of crisps please.***

HIRE INTELLIGENCE

Just a quick note to all those moaning sods who complain about the high prices and then complain how unworth the price of the game was.

Why don't they read the reviews (OK, so they aren't always correct) in the best magazine or even better hire a disk for the many more clubs now available. Together with a few friends I hire the games we wish to see and if they are up to scratch then we would purchase a copy. Simple stuff, but it saves all the "feeling sorry for oneself" attitude. (By the way, I don't happen to run one of these hire clubs – honestly!)
Jan Kellett, Wrexham, Clwyd

BAD FOLIO?

The Atari Folio (now Portfolio) doesn't look as though it will take off. Firstly, it's a PC (urrghh!) and all PCs tend to be on 5.25 or 3.5 inch disks. The whole philosophy of the PC was to share software without all that mucking about with RS232 s. If a Folio uses a smart card the whole idea of PC compatibility would be lost, because unless you got a card drive for the PC it wouldn't really be worth having.
Timothy Gowen, Diss, Norfolk ➤

EXPRESS MAIL

YOUR LETTERS

● *Well, smart card technology may well take off in the 90s and bring down the price of PC smart card drives, making the Folio a more legitimate looking proposition. I think it will succeed. Certainly the Folio is the thing people in the Express office want to get their hands on most (after a copy of Kick Off on the Amiga).*

• The Pocket PC uses cards, not disks: Not so smart, says Timothy Gowen

DRAGON MY FOOT

After reading the article on PD software, I thought I would let you know about the PD software which is available for the Dragon, as you presumably didn't know about this.

Listed below are the addresses of several suppliers, all with a fair selection of software.

• NDUG Graphics Library (Library of graphics screens):
'The Librarian', Ray Smith, 5 Glen Road, Parkstone, Poole, Dorset, BH14 OHF
• Techbase PD Library (Mainly for utilities but also games):
Mr Lee Cooke, Techbase, 117 Linbrick Lane, Goring-by-Sea, Worthing, W Sussex
• Dragon Domain – Public Domain:
Dragonfire Services, Unit 3 Rising Sun Enterprise Centre, Blaina, Gwent, NP3 3JU
• Dewsoft School House, Nevern Road, Rayleigh, Essex, SS6 7PE
• OS/9 PD Library:
David Rothery, 1 Heath Road, Glossop, Derbyshire, SK13 3RY
S Knight, Birmingham, West Midlands

● *Thanks for the info.*

MULTIFACE THE FACTS

I feel I must put forward my views on software piracy and the new copyright act which is threatening products such as Romantic Robot's multiface and software hiring libraries.

I own an Amstrad CPC which was bought primarily as a games machine. I could not afford full priced games at regular enough intervals to sustain my interest and, as budget software was of a poor standard at the time, my computer was put on the shelf and forgotten about.

Then last year I discovered software hiring libraries and immediately joined one. By hiring games and, dare I say it, copying them onto disk, power once again surged continually through my computer. This lead me to subscribing to all the computer magazines and buying the much improved budget software. And then it happened: I bought a full-priced game.

By hiring and copying games, the interest in the computer is not only kept alive but actually boosts it so that when a piece of software is released that a person really wants he will buy it. Thus without software piracy and without the software libraries I believe that it would be the final nail in the coffin of full priced software and, unless it can be provided on disk, will also affect sales of budget price software.
M D, Cleethorpes, South Humberside

● *The piracy-stimulates-the-market argument is an attractive one but I'm dubious. If we were all responsible users, and we only copied games we wouldn't otherwise have bought, it would be more convincing. I think what tends to disprove it is that in Britain the concept of shareware – copy-it-and-pay-if-you-want software – has failed totally.*

• Interface facts: copying devices are good for the market, says M D of Cleethorpes

MEDIA BUYERS

So Micro Media have sorted out my problem? I just wish they'd told me! It seems as if they're now lying to you as well as to me.

How Micro Media can place adverts saying "You get more for your money than just our name" is beyond me. All I've got for my £325 cheque which was cashed last December is a massive phone bill and more lies than *The Sun*.

Quoting their advert:

"For a start we are an established company who will be around to look after you in a year's time and not 'gone with the wind' (and your money)".

(a) They're established on my money and no doubt other people's money in the same position as me.

(b) Micro Media won't be gone with the wind – they didn't even come with the wind, but they sure are full of it.

(c) How can they advertise that they won't be gone with my money? Is this a sick joke?
M J Burley, Purley, Surrey

● *Micro Media are telling us they have administrative problems which will be resolved shortly etc. The Glasgow Festival is holding them up, they say.*

ATMOS FEARS

A couple of days ago, I bought myself an Oric Atmos, complete with (I presume) 48K of RAM. I think I may hurt the feelings of some existing Oric enthusiasts by saying that I got it for a fiver at a car boot sale; but the fact is that I think I like it. From what I guess, it has a decent BASIC, and moderate graphics and sound for an early machine. I also like the keyboard – but then almost anything is better than an Atari ST keyboard.

The trouble is, you see, that I didn't actually get a manual with it, so I am at a loss for what to do with it. Do you know of any Oric user clubs (do they still exist?)

I like your magazine. I like to think of it as a supplement to the monthly magazines. Your humour is, on occasions, unsurpassed in any other magazine dealing with computers, and for this I thank you for brightening up my Saturdays.
Steve D Sharples, Bingley, West Yorkshire

● *Try Allan Whitaker HGC, 8 Staley Rd, Staleybridge, Cheshire SKT 3DT (061 303 7369) who runs an Oric book and software mail order service, or Robert Cook, 10 Thompson Ave, Kings Norton, Birmingham B38 8YD who runs* Oric User Monthly.

Thanks for the compliments. Actually we find a lot of computer magazines – from the ones with people in bow ties talking about PS/2 down to the games rags – very funny, but perhaps not intentionally so.

THE SYSTEM IS BULL

So prisoners in Avon's Leyhill Prison are being given the chance to learn computing skills on a Bull XPW-100 Mini computer to prepare them for the possibility of worthwhile jobs when they are eventually released (*Express* 36).

I have no idea of what the Bull System would cost but presumably the finance comes from the taxpayer. Don't get me wrong, I am all for rehabilitation, but feel a little more than angry about this article for the following reasons...

Cliff is a disabled and housebound man (unable to leave his home because of Cerebral Palsy and further damage to his balance system by a stroke over three years ago)... so in effect, through no fault of his own and although he has committed no crime, he is a prisoner in his own home... and yet when he applied for government help and funding to take and Open University Course in Computer Science he was refused financial help to purchase the necessary IBM equipment. His Occupational Therapist approached Charities and even they refused to help. The idea was to gain extra qualifications so that eventually he might be able to program and work from home and not be a burden on the state.

He is not new to computing as many of your readers may know. He runs an On-Line HelpLine Service for the Disabled and New User to the Communications world, called Cliff's Corner. He has written the Host Software himself and runs it on a two year old Atari and 1 meg drive. It may seem a very small set up compared to some BBS, but then nothing has been donated, given free or even at reduced price. Helping others has been a life-saver to him, making him feel a useful member of society, but all at his own expense.

His body may be partially paralysed but his brain isn't and given the hardware he could accomplish his dream.

It's a pity that the Government and so-called Charitable Institutions are not as helpful to the Housebound Disabled as they appear to be to those who have committed crimes against society. All should be given an equal chance.
S Jones (Mrs), Oulton, Suffolk

● *Well, I can only echo your points. If Cliff would like to write to us explaining what he does we'd be glad to hear from him and give him a bit of coverage.*

Snippets

FAST OR WHAT

...You might like to hear about a firm that delivers the goods. Recently I ordered a workstation from Computing Plus by phone using a credit card. It arrived, by Eagle Express delivery service, the following morning...
V C MacRae, Blackpool, Lancs

● *Can anyone beat that for fast service?*

C HERE

...Worst thing about computing is all the terrible puns on 'C'. 'C for yourself', 'as far as the eye can C'... so old, and none are original any more...
Timothy Gowen, Diss, Norfolk

● *One day the Shoot-'Em-Up Construction Kit will have a C compiler with it, and we can have the headline* SEUCK it and C.

THE THINGS THEY SAY

Overheard from customers in our retail branches:

• "This won't run on my Commodore because Amstrad bought Commodore over last year."
• "Will this game 'fit' my computer?" (I hate that one).
• "Ten 3" hard disks for a PCW 256".
"Oh, you mean floppy disks"
"No stupid, hard disks".
Paul Quinn, Bit by Bit Computer Services

ARCHIE ENEMY

It seems from recent letters pages that a few people already own an Archie and couldn't resist writing in to brag. I wonder if they were the same people who bought those Philips V2000 VCRs a few years ago?
Chris Longley, Houghton-le-Spring, Tyne and Wear

● *And who bought satellite dishes when they cost £800, who are backing Shergar to win the next Derby ridden by Lord Lucan, and who won't holiday in Spain because it's too hot and you can't drink the water.*

STATING HIS LOWER CASE

I suppose I'll get panned by the amiga owners (note the lower case spelling of amiga), both of them, for my anti-amiga comments.

But any letters printed from amiga owners will only reinforce my statement about their self-righteous nature.

I think that the amiga is a fine machine in principal, but the implementation and quality control is absolutely abysmal, not to mention *Workbench*.

Paul Quinn, Bit By Bit Computer Services, Ayr, Scotland

● ***Argh! I told you not to mention Workbench...***

OH NO, ANOTHER GUINEA PIG LETTER

I breed cavies – guinea pigs – and I noticed in Snippets (*Express* 36) that Lawrence Sheed of London suggested a guinea pig column. There was also a pic of a Dutch cavy next to an Amstrad.

Well, it so happens that I have an Agouti called Lupin that is willing to write such a column in exchange for 3 lbs of carrots per page, while a Himalayan named Napoleon will use the wp software to type it. All he wants is half a cauliflower a day and a companion called Jo. How about it?

Don Howard, Croxley Green, Herts

● ***The efforts of Basil, the Dutch cavy with the Amstrad PCW, were fruitless as he would only type the letter E repeatedly.***

I'm afraid we can't offer our columnists cauliflowers or carrots. Only chickenfeed and peanuts.

POOR SHOW

What an abysmal "show" the Atari Computer Show turned out to be. My fiancee and I were particularly keen to talk to someone about the Folio Pocket PC, the new hand held console, and the proposed STE.

Not too much to ask, but what did we find upon entering? A hall full of box-shifters anxious not to have to reload their vans at the shows end.

Slightly despondently we set off to find the Atari stand. Twenty minutes later we left for home having discovered that Atari wished to have nothing to do with this "car boot sale".

The shows only saving grace as far as we were concerned was that quite by chance we were given complimentary tickets in the car park. If we had left Alexandra Palace ten pounds poorer we might have been a little upset!

Keep up the good work *Express*, thanks to you I'm saving quite a bit of cash by not needing to buy any other magazines.

Nick Edelsten, Chesham, Bucks

● ***Computer shows seem to be drifting towards being large market places that you pay a fiver to get in for. You can buy a magazine and check the mail order ads if you just want to buy some kit.***

The days of seeing anything actually launched or demonstrated for the first time are gone; the magazines – which seem to preview everything months before it even gets to the prototype stage – have taken over the function completely, so maybe we're partly to blame, along with other factors such as the tailing off of the eighties home computer boom.

• This year's car boot sale, aka the Atari Show, didn't impress Nick Edelsten

EXPRESS NEEDS YOU!

New Computer Express is revamping its games pages – and we need your help.

Coming out every week means we can be first with those pokes and cheats, tips and tactics, and your high scores on all the games.

So if you've found anything, pass the message on! We're particularly interested in these games:

Silkworm (Virgin, Spectrum/ C64/ CPC/ ST/ Amiga) **Dominator** (System 3, Spectrum/ C64/ CPC/ ST/ Amiga)

New Zealand Story (Ocean, Spectrum/ C64/ CPC/ ST/Amiga)

Forgotten Worlds (US Gold, Spectrum/ C64/ CPC/ ST/ Amiga)

Licence to Kill (Domark, Spectrum/ C64/ CPC/ ST/ Amiga)

If you want to brag about your high score, we want to hear – but we also want to know how you did it! No scores will be published unless you give us three tips telling us how you got there – and a description of the level you reached.

So get those postcards and letters coming in. Write to: **Gameplay, New Computer Express, 4 Queen St, Bath BA1 1EJ.**

C&C Computers and Communications

ATTENTION

NEC PC ENGINE ANNOUNCEMENT.

NEC Corporation, NEC Home Electronics Ltd, and NEC (UK) Ltd (collectively 'NEC' hereinafter) have recently become aware that the PC ENGINE is being offered for sale in the United Kingdom. NEC believe that it is important that UK consumers should be aware of the following information.

1. **The PC ENGINE is a product manufactured by NEC Home Electronics Ltd for use with the NTSC transmission system. It is not compatible with the UK PAL transmission system nor any other non NTSC transmission system. For this reason, NEC Corporation does not market the PC ENGINE in the UK or in any other EEC countries.**

2. **There are no authorised distributors of the PC ENGINE in the United Kingdom at present.**
   Therefore, if you are offered a PC ENGINE which is said to be compatible with the PAL system or any transmission system other than NTSC, you should be aware that it will have been modified by a third party.
   This modification is made without NEC's permission or approval.

3. **In the event that a defect should arise in any modified PC ENGINE you must contact the dealer from whom you purchased the product. NEC cannot be held responsible for any defects in any modified PC ENGINE nor be involved in any disputes between purchasers and sellers of such products. In particular, NEC (UK) Ltd cannot respond to service calls in respect of any modified PC ENGINE.**
   Please note that the guarantee provided with each PC ENGINE sold in Japan by NEC Home Electronics Ltd extends only to the use of the unmodified PC ENGINE in Japan and therefore NEC cannot assist you if you purchase a modified PC ENGINE in the UK. Any other guarantee provided with a PC ENGINE in the UK is not an NEC guarantee.
   Finally, any modified PC ENGINE's sent to NEC (UK) Ltd for servicing will be returned to the sender.

NEC Corporation. NEC Home Electronics Ltd. NEC (UK) Ltd.

NEC

Ladbroke Computing International

"The Country's Leading Atari Specialist"

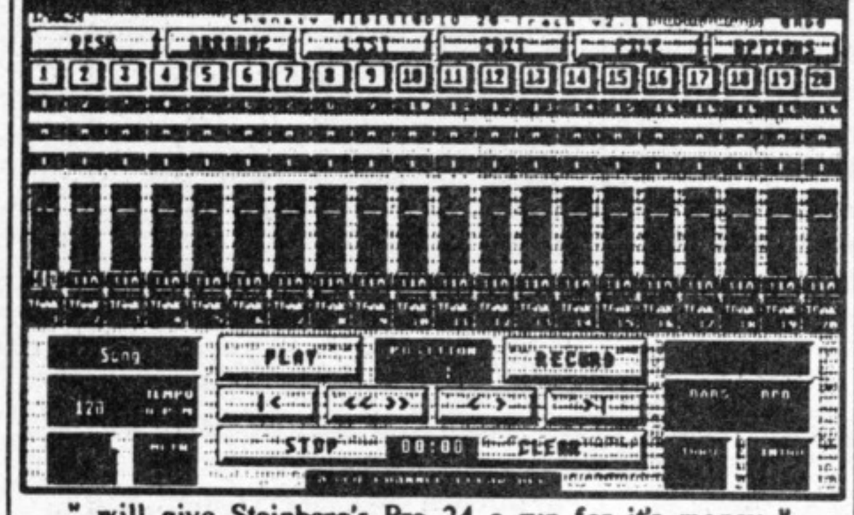
AMIGA

33 Ormskirk Road, Preston, PR1 2QP.
Open Mon. - Sat. 9:30 am to 5:00 pm
Dealer enquiries welcome.

YOU CAN'T AFFORD TO SHOP ELSEWHERE LOOK AT THESE PRICES (INC. VAT)

This company has given years of full support to Atari users from their premises at 33 Ormskirk Road Preston. Now from their Mail Order premises they can offer this" second to none "service to users countrywide. All Software/Hardware is ex-stock and fully tested prior to purchase to ensure that returned goods are now a thing of the past. All hardware is supported by our on site engineers so that quick turn around on all repairs is guaranteed. There are no hidden extras WYSIWYG. ALL PRICES INCLUDE VAT AND DELIVERY on orders over £100 (Mainland UK)(next day delivery +£5). All prices are correct at time of going to press and are subject to change without prior notice. Phone for latest prices, information advice(we are always happy to help.)

Midistudio £99.99



" will give Steinberg's Pro 24 a run for it's money " ST WORLD March 89

Midistudio is an attractively priced 20 track Midi Sequencing package. It can record up to 682 bars per phrase(pattern) on up to 100 phrases. Any phrase can be placed on any track. Tracks can be soloed and muted and tracks and phrases can be named. Program numbers can be displayed in a variety of ways including 0-127, 1-128, in banks from a11-b88 or a01-b64. The desk features sliders to set relative volumes on each track and you can even do a mix on the fly. Midistudio also has a clock to display the length of the last playback. Midistudio has step time note edit functions including copy, split, merge, append, and transpose, velocity editing(including a humanize function), full controller editing, quantizing and a buffer which will store a copy of a phrase for recall after destructive editing. **Demo disk £3.99**

Software

At Least 20% discount off all 16 bit games software.

Minimum Discount

E.G.	RRP	Our Price
	£19.99	£15.99
	£24.99	£19.99
	£29.99	£23.99

Maximum Discount

£19.99	£6.99
£24.99	£9.99

Send SAE for full software catalogue.

Educational software Add with Oscar £12.99, Spell with oscar £12.99, AB Animator £5.99 and Trilogy £5.99 still available also data disks for Spell with Oscar £6.99.

Join our excellent software club / magazine and guarantee at least 15% discount off any software and our free disk based magazine which will include reviews, hints, PD Software. All this for only 1 payment of £25 per year.

Phone for best prices

Free delivery (Mainland UK only) on orders over £40, for orders under £40 add £2.50.

Quality Scanning

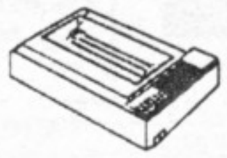
SCAN AT UP TO 1000 DPI FOR ONLY £89.99

Demonstration disk £3.99 (£2.00 redeemable)

The Image Scanner can provide high quality graphics digitising for a tenth of the cost of other digitisers. This simple unit plugs into the cartridge port of the ST and accepts scanned information via optical cables which fix easily to the head of any printer. Scanned images can be saved in raw data, Degas and Neochrome formats. The Software supports scanning resolutions of 75,150,216,300,360 and 1000 dots per inch horizontally. An example disk is available which contains a slide show of images scanned with this product. The cost of this disk is £3.99, £2.00 of which is redeemable on purchase of a scanner.

New Low Price Printers

Star LC 10	£169.99
Star LC 10 Colour	£219.99
Star LC 24/10	£299.99
Epson LQ 500	£319.99
Citizen 120 D	£139.99
SLM 804 Laser	£1299



Phone for others. All printers come complete with Parallel cable.

Hard drives

Vortex 40MB(ST & Amiga)	£499.99
Megafile 30 (ST)	£474.99
Megafile 60 (ST)	£599.99
Supra 30MB (ST)	£474.99
Third Coast 65 MB (ST)	£574.99
(Amiga)	£629.99
Triangle & others	phone

Cumana Disk drives

Cumana 1Mg Drive(ST).....£89.99
Cumana internal 1Mg Drive(ST)
(kit or fitted) £74.99
Please note ST's case may need cutting for above internal drives.

Amiga 1 Mg Drive, disable switch & through port.....£79.99
A/B boot switch (fitted)(ST).....£24.99
Triangle drives & others phone

Peripherals & Dust Covers

Pro Draw Tablet		phone	Computers		£3.99
CRP Tablets	A4	£414	Monitors		£4.99
	A3	£818	Disk Drives		£2.99
Hawk scanner		£1250	Hard Disks		£4.99
Traker ball(ST-Amiga)		£24.99	Printers		£7.99
80 / 100 disk box		£9.99	Others		phone

Phone for prices on all SIGNA products such as Colibri hand scanner with or without OCR, Signum 2, Augur OCR.

Monitors

SM 124 Monochrome Monitor.	£109.99
SC 1224 Colour Monitor.	£299.99
Phillips 8833 Colour Monitor.	£229.99
Phillips 8852 Colour Monitor.	£259.99
Phillips 15" Remote, Scart, Tv with 40 tuner presets.	£229.99

Monitors, deduct £10 if bought with Computer phone for Tv's.
All monitors come with scart to ST/Amiga etc.

Special Offers

PRO 5000 Joystick £8.99
The competition PRO 5000 is one of the best quality joysticks on the market offering precise operation with microswitches.

DCOM Auto fire Joystick	£9.99
Metal Mon stands	£19.99 & £24.99
Antistatic Mouse Mats	£5.99
Mouse/Joystick extension	£5.99
Data switches	£24.99

Repair Centre

Our Atari trained engineers can repair all hardware, including Amigas, in minimum time at competetive prices. We can arrange Pickup for prompt delivery to ourselves for £11.50. Next day courier return £8.00.

UPGRADES EX-STOCK

1 Mg STM (fitted)	£124.99	Upgrade board (Unpopulated)(fitted)(ST)	£60
1 Mg STFM (kit)	£99.99	Board + 1 Mg upgrade(fitted)(ST)	£159.99
STFM upgrade fitting service	£25	Board + 2.5 Mg upgrade(fitted)(ST)	£399.99

Please check machine configuration before ordering. All fitting prices quoted for machines not previously tampered with. Due to the complexity of the installation we must install and upgrade the board for you. All upgrades and repairs carry our 3 months parts and labour guarantee. Pre 1988 ST's can only be upgraded to 2 MB. Phone now for our **Blitter chip upgrades** which work with V1.09 OS.

Phone for our Amiga 512K RAM Extension board with or without clock, populated or unpopulated.

New Low Price Quality Disks

All our disks are top quality Sony, Maxcell or Kao products, not cheap imports. All disks carry an unconditional lifetime guarantee.

Quantity	3.5" D/S	5.25" D/S Q/D 96 TPI
10	£8.99	£6.50
10+box	£9.99	£7.50
100	£79.99	£60
100+box	£82.99	£65
Sony Branded 3.5" D/S Boxed x 10		£10.99
Sony Branded 3.5" D/S Boxed x 100		£99

** New Low Prices ** Computer Systems and Packs ** New Low Prices **

520 STFM Explorer Pack £269.99
Includes Atari 520 STFM with 1/2 Mg Memory, 1 Mg drive and mouse. Includes tutorial disk.

520 STFM Super Pack £329.99
Includes Atari 520 STFM with 1/2 Mg Memory, 1 Mg drive, mouse, joystick and a software pack including organiser software and 21 top quality games.

520 STFM Power Pack £359.99
Includes Atari 520 STFM with 1/2 Mg Memory, 1 Mg drive, mouse, joystick and software pack consisting of organiser software First BASIC, First Music and a selection of 20 top quality games.

1040 STFM Super Pack £449.99
Includes Atari 1040 STFM with 1 Mg Memory and drive and a choice of software packs which include a business pack with database, word processing, spreadsheet and BASIC software, a Midi pack with Pro 12, and a games pack with 21 top quality games.

Amiga A500 Pack £369.99
Includes best selling Amiga A500 computer with 1/2 Mg memory 1 Mg drive, mouse and Tenstar software pack worth £200.

Atari Mega ST 1+Mono Mon £599.99
The new Mega ST 1 includes separate keyboard and cpu, Blitter chip , clock, 1 MB RAM, mouse and a business software pack including database, word processor, speadsheet and BASIC software.

Atari Mega ST 2+Mono Mon £849
The Mega ST 2 includes seperate keyboard and cpu, Blitter chip, 2 MB RAM and mouse. The Mega ST 2 also includes a battery backed clock and business software.

Atari Mega ST 4+Mono Mon £1099
The Mega ST 4 includes seperate keyboard and cpu, Blitter chip, 4 MB RAM and mouse. The Mega ST 4 also includes a battery backed clock and business software.

DTP Pack 1 £phone
This pack consists of Mega 2, external 3.5" drive, SLM 804 Laser printer, Mono monitor,DTP software, 90 days on site maintenance.

DTP Pack 2 £phone
This pack consists of Mega 4, Megafile 30 hard drive, SLM 804 Laser printer, Mono monitor, DTP software and 90 days on site maintenance.

Atari PC 4 (80286) £1499
The PC 4 has an 80286 processor running at 8 or 12 MHz., 1 MB of RAM,60 MB hard drive, 5 AT and 1 XT expansion slots. For Mono monitor add £100. Phone for others.

Atari PC 5 (80386) £2599
The PC 5 has an 80386 processor running at 16 MHz., math coprocessor socket, 64K cache memory, 2 MB RAM, 60 MB hard disk with high performance controller, 4 AT and 1 XT slots. For Mono monitor add £100.

Access

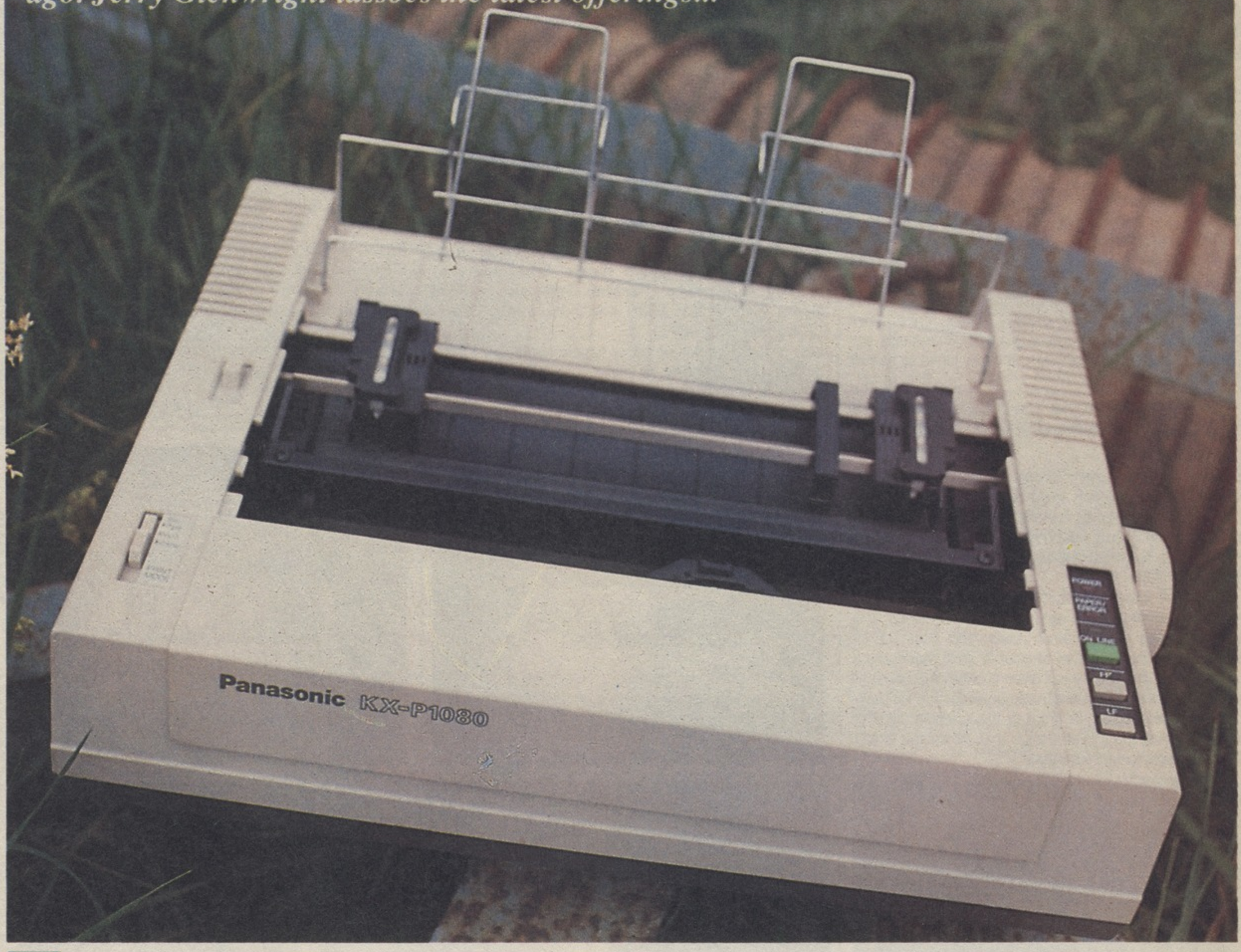
(0772) 203166 or 21474 Fax 27236

VISA

Ladbroke Computing International is a trading name of Walton Marketing Limited.

JOINING THE DOTS

There's never been a better time to buy a printer. Dozens of manufacturers from the Far East to the east of London are vying for your hard-earned with printers sporting technology unaffordable outside the average multinational corporation a few years ago. Jerry Glenwright lassoes the latest offerings...



The old adage about "being judged by your countenance" is particularly apt when discussing the subject of printers. You may have a thousand pounds' worth of computer and monitor sitting on your desk but if the letters you send out are printed on the Sinclair tinfoil printer circa 1981, then the sophistication of your equipment and computer expertise will come to nought as the recipient of your missive assumes you're word processing on something with the letters ZX in its name.

On the other hand, use a good quality printer (and it needn't be expensive), and the appearance, and therefore the perceived quality of your work will improve by leaps and bounds. Today, presentation is all.

There are three main types of printer in general use today – the laser, daisy wheel and dot matrix. Each of these machines tends to fall into its own classic division of graphics/DTP, business and home user, but with improvements in the technology and sharp reductions in price (in an attempt to oust competition), the divisions have blurred and it's no longer necessary for individuals at the low end of the cash-flow spectrum to resort to the cheapest dot matrix on the market.

● The laser printer is a relatively recent addition to the printer bazaar but is already firmly established in areas requiring superior quality reproduction at an affordable price.

The printer works by firing a laser beam at a rotating drum, leaving an impression of the document to be printed. The drum picks up a dry toning powder on the non-lasered parts, which is then transferred to paper by impression. The process is quick, clean and of a very high quality and resolution – typically 300 dots per inch.

Unfortunately, the laser printer remains just out of reach of the average home user – but more and more small businesses are able to buy them and soon the price will match everyone's pocket.

● The daisy wheel printer – traditionally the last word in good quality printing – is, like the mini computer, gradually losing its grip on the market, due to the advances of dot matrix machines and the relatively small prices of laser printers. The daisy wheel still has an enormous installed user base though, and for sheer quality of print it's difficult to match.

Like its little brother the dot matrix, the daisy wheel printer relies upon impaction in order to reproduce text. To do this the machine has a wheel, shaped like the head of a daisy with each of the petals replaced by a metal arm bearing a raised alpha or numeric character at the tip. The wheel is turned about its hub until the desired letter is in place, the arm swings forward and the letter or number makes contact via a ribbon with the paper. Quality of text is equal to that of a good quality typewriter, but the device is slow – typically 12-25 characters per second – and extremely noisy. Because of the nature of the daisy wheel the printer cannot be used to reproduce graphics.

● The largest selling printing device today is the dot matrix. Infinitely flexible, cheap, yet capable of remarkable results, this is the machine for computer users ➤

who require superior printing on a restricted budget. The dot matrix can handle everything from business and personal letters to full scale graphics. It prints at a speed unmatched outside £1,500-worth of laser printer and you won't have to sell your vital organs in order to raise the cash to buy it.

Be careful with prices. The actual cost of a machine is usually significantly lower (sometimes £100 or more) than the manufacturer's recommended retail price. The rule is to scour the computer magazines and really shop around for the best deal.

The dot matrix has at its operating heart a matrix of pins – usually around 7 x 9 – which, when selected pins are fired through an inked ribbon, produce alpha, numeric and graphics characters. Because the pins can be selected in any order, the printer can reproduce any glyph the user's heart desires and the machine offers an unparalled degree flexibility in that price range.

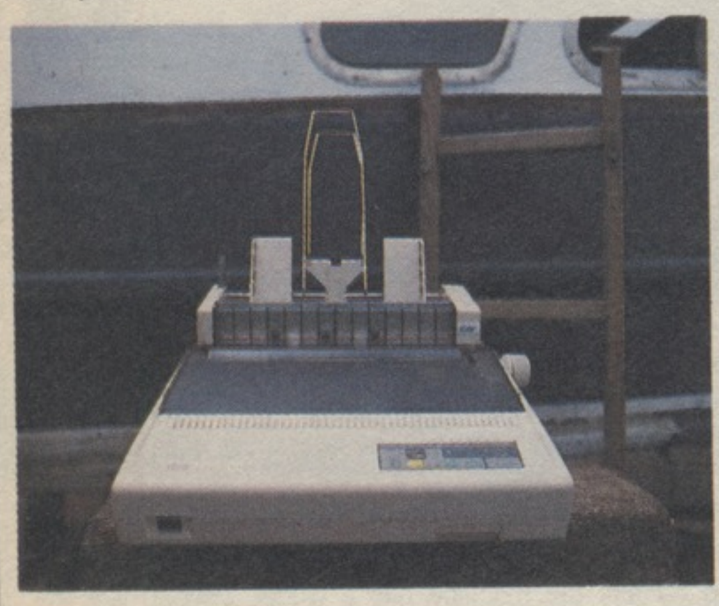
Advances in the matrix print heads have produced devices with 24 pins in the matrix. The greater the number of pins contained within the matrix, the greater the resolution of the printing (resolution is the term used to describe the amount of printable dots on a page). Initially exensive, the 24-pin dot matrix is at last affordable by the person in the street and is a real alternative to far more costly printing methods.

Although dot matrix-based printers cannot be described as being quiet, the noise they produce is bearable and considerably less than that of the daisy wheel. Printing speeds – even in the very cheapest machines – are upwards of one hundred characters per second and the characters can be double struck (printed once, then printed again over the top of the original) in order to improve their quality. Double strike slows down printing speeds to around 25-35 characters per second but offers a quality of print very close to that of the daisy wheel.

STAR LC-10 and LC-10 colour (9 pin)

Speed: 144cps draft/36cps NLQ • Paper handling: Tractor, friction feed and auto single sheet loading • Interface: Parallel Centronics • RAM buffer: 4K • Price £229rrp (around £30 for the colour add-on) • Manufacturer: Star Micronics Ltd (01 840 1800)

One of the most popular of the 9-pin, 80-column printers at the moment, and deservedly so. It's cheap, fast and of a high quality construction. The basic LC-10 offers a reasonable speed of print in draft mode and a comparitively fast NLQ (near letter quality) of 30 cps. All of the functions of the printer can be accessed via push-buttons positioned at the front of the machine. Best of all, there's a cheap add-on device that allows you to produce printouts in seven colours.



Star LC24-10 (24 pin)

Speed: 170cps draft/57cps NLQ • Paper handling: Tractor, friction and auto single sheet loading • Interface: Parallel Centronics • RAM buffer 7K • Price: £399rrp • Manufacturer: Star Micronics Ltd (01 840 1800)

The 24-pin dot matrix is starting to become an affordable alternative to the traditional 9-pin machines, and the LC24-10 is a one of the better examples. Fast, top-quality NLQ printing, lots of built-in fonts and good quality construction total uρ to a superior printer. If high resolution and speed top your list, take a look at the LC24-10.

Decision time

For general purposes, the dot matrix is the machine to buy. Flexible, cheap and readily available. The question is, which dot matrix – 9-pin or the more expensive but superior quality 24-pin? Cast an eye over the small print before you decide...

● The 9-pin printer costing between £125 and £200 offers good quality print at a resolution supremely suitable to everyday printing. Programmers who need long listings, games players who produce the occasional letter to their chums and those who like to doodle with art packages will all find the 9-pin dot matrix machine satisfactory.

● If you run a small business and need to produce hundreds of quality mailshots, the 24-pin printer is for you. Costing around £400, the print quality is breathtaking. Artists who can't quite muster the moolah for the purchase of a laser printer can buy a 24-pin dot matrix at less than half the price and reproduce graphical masterpieces at a resolution suitable for even the most critical eye.

The 24-pin dot matrix is approximately twice the price of the average 9-pin but has a resolution measured in exponential terms.

Panasonic KXP1081 (9 pin)

Speed: 120cps draft/24cps NLQ • Paper handling: Tractor and friction feed • Interface: Parallel Centronics • RAM buffer 1K • Price: £219 • Manufacturer: Panasonic UK Ltd (0344 853915)

One of the best selling 80-column 9-pin printers at the moment. The machine is extremely cheap, fully Epson-compatible, has a reasonable turn of speed and is readily available – highly recommended.

Citizen Swift 24 (24pin)

Speed: 192cps draft/64cps NLQ • Paper handling: Fan fold or single sheets. Front and rear loading • Interface: Parallel Centronics • RAM Buffer 8K • Price: £389 • Manufacturer: Citizen UK Ltd (01 388 9871)

Lots of fonts, innovative paper handling and a very competitive price combine to make this printer extremely attractive to computer users who require superior quality print but have limited funds. With an 8K RAM buffer expandable to 40K, a paper parking feature which improves the path of the paper through the printer and readily swapped continuous/single sheet paper feed, the machine also offers noise levels lower than those of any competitor. The Swift 24 can also "pretend" to be an Epson LQ, IBM Proprinter or a NEC machine.

Epson LX800 (9 pin)

Speed: 180cps draft/30cps NLQ • Paper Handling: Fan fold • Interface: Parallel Centronics • RAM buffer 3K • Price: £279rrp • Manufacturer: Epson UK Ltd (0442 61144)

Epson has built up a reputation in the dot matrix field second to none. The Epson control codes have even been adopted as an industry standard. A little more expensive than Epson-compatible equivalent machines from other manufacturers, the machines are of a very high quality and consumables such as ribbons are cheap. If money is to you but a mere trifle, choose the LX800.

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MIMIC		80	182.00	182.00	345.00	96.00	96.00	290.00	68.00	135.00	178.00	180.00	80	MIMIC
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SOFTWARE GOING CHEEP

Not content with being the only Public Domain software developer to concentrate solely on games, Budgie UK has now launched a whole new concept in PD software – Licenceware. Rik Haynes talks to co-founder of Budgie UK Camy Maertens to find out why they write games for next to nothing...

Formed in April 1987 by Camy Maertens and Simon Rush, Budgie UK is the only software developer in the world to concentrate solely on creating Public Domain games. It was born out of the two enthusiasts' love for the ST, and set up because Maertens and Rush didn't know whether they were good enough to challenge the big boys in the software publishing world. However, they were sure they could challenge the budget companies. "There was hardly any budget software on the ST then, and we aimed at the £2.95 price point instead of the normal £9.95 to compete".

Budgie decided to concentrate on games instead of the more usual PD diet of utilities, because games require more work in the graphics and sound departments, thus posing a greater challenge to the programmer. Anyway, they weren't too keen on producing utilities because they didn't understand the intricacies of the operating system at the time. Unfortunately, they hit a lot of snags at first, due to the ST's lack of hardware support for doing all the games-type functions like horizontal and vertical scrolling and sprites. "We didn't like what we saw, but we had to swallow it".

Another driving force behind Budgie is the concept of sharing programming knowledge. "Why write something that already exists? Particularly if it's a routine that's not creative. Of course, if you have a special explosion routine you want to keep it to yourself, but if you want to clear the screen that's just a common simple routine which everyone can share". Since it started, Budgie has gathered all these routines from members, books and magazines and placed them into "the shell" – a collection of 150 machine code routines ranging from sound effects to vertical blank interrupt handlers, available to anyone who asks for it. "If anybody sends us a single routine we respond by sending back our entire shell, to help stimulate further work from that correspondent".

An ever-increasing problem Budgie encounters with writing PD software is the epidemic of ST viruses out on the streets. "The very first instruction in Budgie games is to read the boot sector, check whether unauthorised code in there – i.e. a virus – and if so, eradicate it automatically. We also check to see if there's been any tampering with the copyright messages. ST viruses are a growing problem. We have to make sure that everything we release is clean".

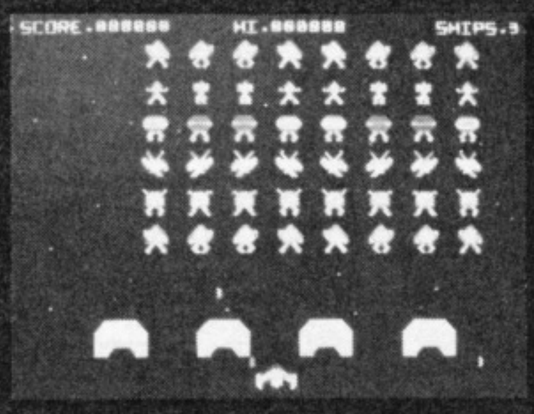
Birds of a feather

Budgie now consists of 13 programmers, with ages ranging from 17 to 48. Budgie has no timetables, no deadlines. "We don't follow market trends, we write what we want. Because we've got 24 games in our range, there's bound to be something there for everybody. We work on three games at a time, and commute from one to the other to avoid boredom. Everybody helps each other". "Gary Wheaton is the fastest writer in Budgie, he wrote *Ace Invaders* in less than a week. Admittedly he does work day and night".

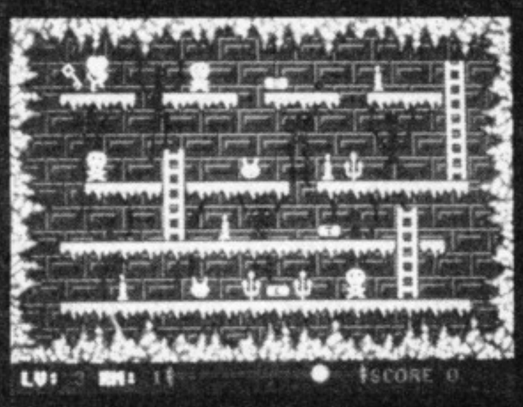
Maertens himself got involved in programming through necessity, "I needed a database program for my shop. None were available, so I had to

Softography

Damonoid • Camy Maertens • Written in 68000 • Released in December 87
The first Budgie release, *Damonoid* is an arcade game mixture of zBreakout and shoot-'em-up.
Football 88 • Simon Rush • Fast Basic • Released in December 87
Football 88 is Budgie's most popular game, and is of course, a football management simulator.
Blitz • Camy Maertens • 68000 • Released in March 88
Based on the classic Vic-20 game.
Othello • Jim Holmwood • Fast Basic • Released in April 88
Implementation of the board game *Reversi*.
Pro Darts • Martyn Carr • Fast Basic • Released in May 88
A darts simulation, blessed with a lack of fat slob players.
Dr Boris • Alex Dewdney • Fast Basic • Released in June 88
You have to stop a TNT maniac by defusing his unsavoury work.
Puzzler • Alex Dewdney • Fast Basic • Released in June 88
On the same disk as *Dr Boris*, *Puzzler* is amazingly enough a puzzle game.
Ball Zone • Ian Grainger • Hisoft Basic • Released in July 88
An *Arkanoid* clone, voted Game of the Year by Page 6.
Speculator • Camy Meartens • 68000 • Released in September 88
Simulation of the futures markets.
Ace Invaders • Gary Wheaton • 68000 • Released in October 88



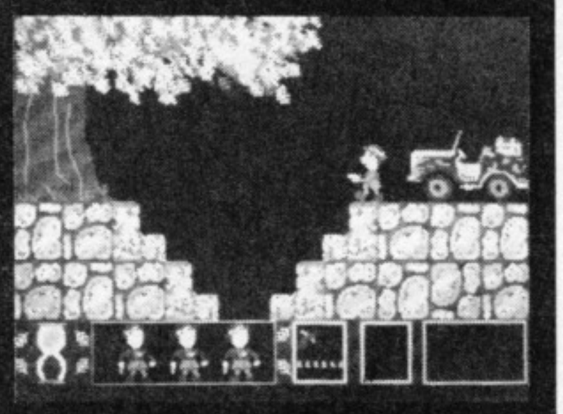
Another popular Budgie release based on the classic coin-op.
Tycoon • Simon Rush • Fast Basic • Released in November 88
Mineral exploration simulation.
Moneyspinner • Jim Holmwood • 68000 • Released in November 88
Slot machine game.
Maelstrom • Marvey Mills • 68000 • Released in November 88
Vertically-scrolling shoot-'em-up.
Zenith • Gary Wheaton • 68000 • Released in November 88
Simultaneous two-player shoot-'em-up.
Goldrush • Mark Annetts • GFA Basic • Released in December 88
Platform game inspired by the brilliant C64 game *Loderunner*.
Zerphod • Ian Grainger • Hisoft Basic • Released in December 88
Doubling up with *Goldrush*, *Zerphod* is a maze game.
Line of Four • Philip Bishop • STOS • Released in March 89
A version of the *Connect Four* boardgame.
Word Puzzle Generator • Keith Bearman • Hisoft Basic • Released in April 89
Guess what this one does?
Make a Break • Martyn Brown • 68000 • Released in May 89
Trivia quiz heavily influenced by Snooker.
Parabellum • Alex Dewdney • STOS • Released in May 89
Cute platfrom game.



Tri Heli • Gary Wheaton • 68000 • Released in July 89
Helicopter shoot-'em-up.
Cosmos • Gary Wheaton • 68000 • Released in July 89
On the same disk as *Tri Heli*, both of these games are ST versions of earlier Atari 800 releases.

Out soon...

Perils of Penfold • Philip Bishop • STOS • Expected August 89
Platform arcade adventure.



Impulse • Ian Grainger • 68000 • Expected August 89
Arcade game.
Sea King • Jim Holmwood • 68000 • Expected in September 89
Strategic scrolling game.
Final Lap • Camy Maertens • 68000 • Expected October 89
Racing-simulation.
Cosmic Rain • Damon Barwin • 68000 • Expected October 89
Shoot-'em-up.
Duck Shoot • Simon Rush • 68000 • Expected December 89
Arcade game.

write it myself in *C64 BASIC* back in 1983". Although Maertens always wanted to move onto assembly language programming on the C64, he never managed to get to grips with it because the tools in those days weren't as sophisticated as they are today. "Products such as Hisoft's *Devpac 2* Assembler, Rombo Productions Vidi-ST video digitiser and Microdeal's *Replay 4* sound sampler have made software development much easier".

On the road to Licenceware...

Dissatisfied with the usual PD programmers' financial reward for their work – i.e. nothing – Budgie decided to start a new concept in PD royalties – Licenceware.

Unlike the popular US method, Shareware – where the user sends the programmer a donation if they like and keep the program, and which is completely unsuccessful in the UK – Budgie takes a 5%-10% "cut" from the proceeds gained by the PD distributor when selling each Budgie disk. Maertens likens this to the store owner charging VAT on the goods they sell. Budgie UK games are solely distributed through these Licensed distributors.

"We divide the proceeds received by the number of games the author has written. We don't find out who is the most successful because we don't want to discourage the other guys. Everyone's put the effort in, after all".

Interestingly, both Maertens and Rush, the two founder members of Budgie, have decided to forego any financial benefit whatsoever. The Budgie programmers can only hope to make about £20 a month – it's really done for the enjoyment.

The Licenceware concept has proved to be popular with both Budgie members and the PD distributing fraternity, with all the major PD distributors agreeing to join the scheme, including ST Club, Goodman PDL, ST UK, Page 6, Floppyshop ST and Softville. In fact, ST Club has just struck a deal with an ST computer magazine in Germany who have decided to implement Licenceware for the best 30 PD programs in their catalogue.

Snippets...

- "If we'd bought an Amiga before we bought an ST, all Budgie games would probably be on the Amiga!"
- "Virus writers and crackers boast about their knowledge and the capability to do something special, and yet what they do is so negative – they're second class really."
- "The hardest part to write in a game is sticking to a scenario and seeing it through to the end – its easy to get bored and discouraged. Not watching the TV is also a problem."
- "*Football 88* is our best selling game, simply because everybody in this country likes football sims. In fact, its so popular that people keep writing to us begging us for another version."

• Camy Maertens: "We don't follow market trends. We write what we want"

...but where next?

Although Budgie is still not not ready to go fully commercial, mainly due to all the financial implications that move would entail, it has a continued commitment to PD games, and intends to produce approximately 75 games over the next five years. "The future of Budgie lies in the continued long-term exchange of routines and ideas amongst all the members, with an attempt to get our members a token financial reward for their work using Licenceware".

With two successful Atari shows under its belt, sales of 7,000-10,000 Budgie disks per year, and with Budgie games now being distributed in Germany, Holland, Scandinavia, the future certainly looks bright for this group of ST enthusiasts.

But then again, Maertens philosophically says, "We might get bored with the whole thing in two years time and go on to something completely different".

Only time will tell... ●

Budgie UK would love to hear from any ST owners out there. Write to: Camy Maertens, Budgie UK, 5 Minster Close, Rayleigh, Essex SS6 8SF

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• Tandy sells a range of laptop and portable computers. Seen here is the A4-sized 102

TANDY (CO.): Known as Radio Shack in the United States, Tandy is a consumer electronics company that branched into home, portable and small business computers in the late 70s and made a large impact on the market (not in the UK – Tandy computers remained relatively obscure here) due to its large chain of stores. Today, Tandy PC compatibles have a respectable installed user base, the laptop machines have considerable support but the 6809-based home machines change hands for a few pounds and are largely ignored outside the occasional alternative micro show.

TAPE (T): Prior to the advent of random access magnetic disk storage, the use of magnetic tape as a high capacity storage medium was widespread. The tape is exactly the same as that used in domestic cassette recorders and consequently has all of the associated disadvantages of that medium – especially the problem of sequential access. Users wishing to retrieve a particular piece of information, must cycle through everything on the tape until they reach the desired data – this process is *very* slow. Business computer users in the early 1970s quickly adopted the newly-developed disk drives and the use of tape was relegated to backups of hard disks and as a storage medium for home computers. See also ***disk drive***.

• Many 8-bit computers still use cassette tape as a storage medium. The Commodore 64 has its own dedicated cassette drive – the C2N

TASK (T): Any action carried out by a computer such as loading a program, updating the monitor screen etc is known as a task.

TASWORD (WP): Word processing package from Tasman software originally available for the Spectrum but ported to many other machines (CPC, PCW, PC) due to its popularity.

TELESOFTWARE (T): Any software transmitted with a teletext signal is known as telesoftware. Users of teletext can download games and other programs for use with their home computers. See also ***teletext***.

TELETEXT (T): A one-way medium for communications developed in the 1970s. Pictures and other information is transmitted alongside television signals, decoded by an electronic gizmo located in the recipient's television set and displayed on the screen. Although interested parties had high hopes for teletext it didn't quite fulfil its potential. Several reasons exist to explain this, chiefly the level of sophistication of the intended market. No-one wanted to sit dumbly whilst a screen of information appeared before them, they wanted to interact with the medium (as per home computers) which is an inherent inability of teletext.

TEMPLATE (T): Spreadsheets, although extremely useful to business users, are complex affairs which require a high level of 'set up' before they can be used usefully. The process is complex and requires much time. Fortunately, rather than have to perform the set up each time the spreadsheet is used, it can be saved to disk as a template and loaded each time the spreadsheet is used.

TERMINAL (T): A keyboard and display screen attached via some medium to a host computer. Terminals allow remote users to communicate with a computer. The concept of the terminal was originally associated with the mainframe and mini machines of the 60s and 70s.

With the advent of cheap communications many ordinary home computer users are turning their machines into remote terminals to services such as Prestel and Telecom Gold via the telephone lines.

TETRIS (G): Simple, yet highly addictive game from the Soviet Union in which a series of tumbling blocks have to be arranged to form solid lines.

The game was designed by Alexei Pazhitnov at the USSR Acadmey of Sciences and is the first game to come to the West from the East bloc.

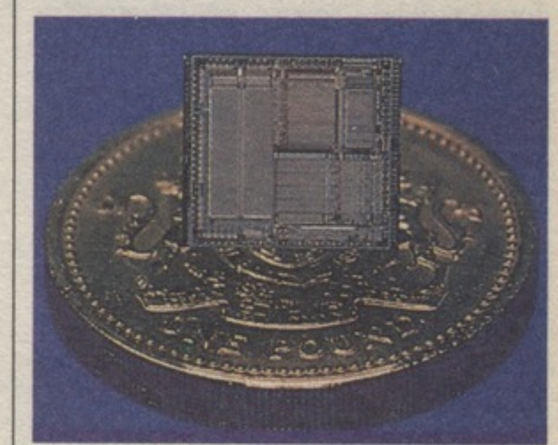
TEXT EDITOR (T): Generic name for applications programs which facilitate the manipulation of text. Text editors are more commonly known in their guise of word processors. The text of documents and letters can be typed into the word processor, stored, retreived, edited, added to and generally moved around. Once the document is as the user originally envisaged it can be printed out. Text editors also receive extensive use in the field of programming where they are used to write the original source code of a program before being offered to a compiler and run. See also ***WordStar***.

• A word processor such as WordStar is really a glorified text editor

THERMAL PRINTER (T): A printer which employs heat rather than impaction in order to reproduce characters on paper. Thermal printers print by melting wires containing ink which is then transferred to the paper (often a special kind of paper). The quality of print is mediocre, paper is expensive and printing is slow but the printer itself is relatively cheap, extremely quiet and reliable. Brother enjoyed reasonable success in the early 80s with its HR5 thermal printer. Powered by batteries, the device was small and completely portable. See also ***daisy wheel***, ***dot matrix***, ***laser***.

THIRD GENERATION COMPUTERS (T): Generic name for computers which use integrated circuits in order to perform computation. Contrast with ***first generation***, ***second generation***.

TIME SLICING (T): Today the computer industry is developing possible applications for parallel processing as ➤



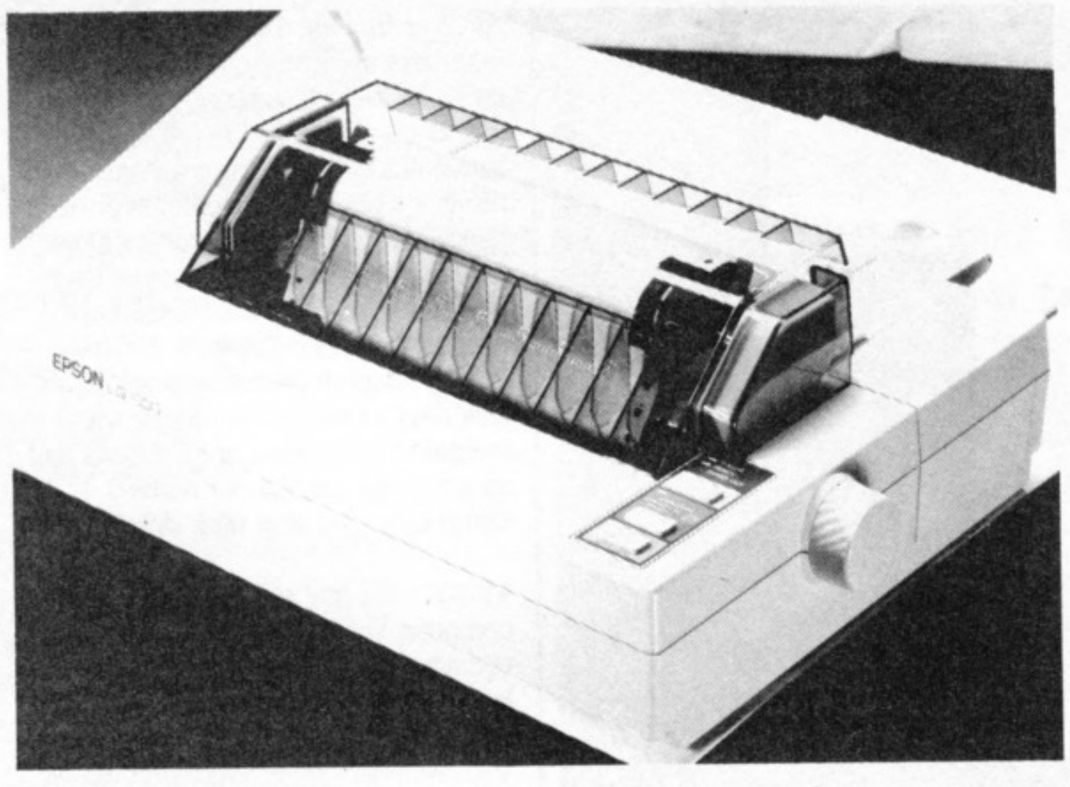
• Inmos's transputer offers parallel processing, or "time slicing"

Key: C - computer Co - company DB - database DTP - desktop publishing G - game GG - game genre Gr - graphics Int - integrated software L - languages P - personalities SS - spreadsheets T - tech spec WP - word processor

provided by Inmos's transputer.

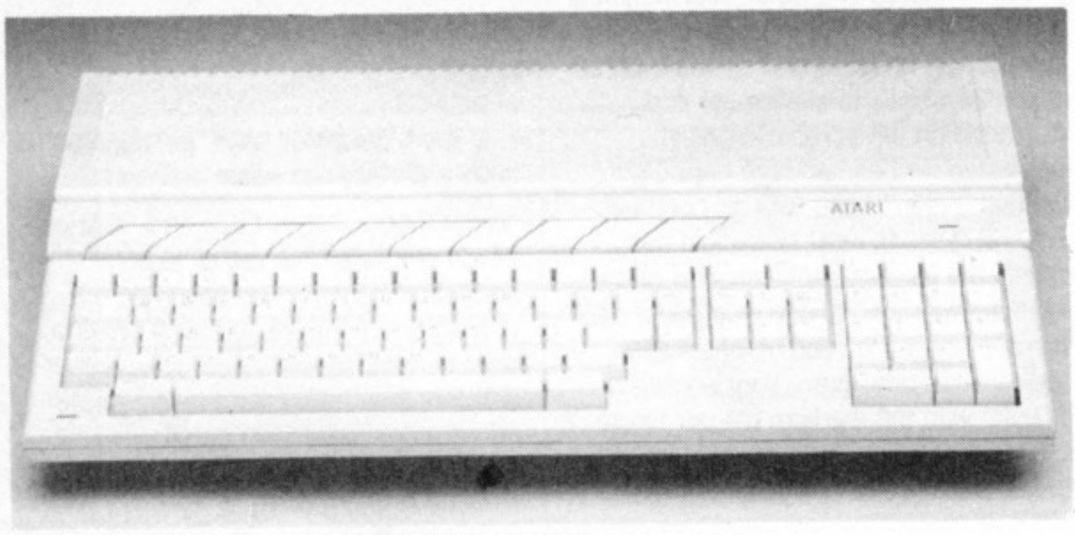
But the concept of parallel processing goes back to the dawn of computing, and early attempts used a process known as "time slicing" in order to achieve a kind of parallelism. Time slicing involves the division of available processor time into lots of little slices which are then allocated to the jobs currently being run on the computer which require attention. These jobs operate in a hierarchy according to their importance and receive processor time depending upon their place in the hierarchy. Because the computer operates at very fast speeds when compared to the average user, the machine appears to be serving many jobs at once. Time slicing is used on almost all mainframe and mini computers in order to support a large group of users. See also ***parallel processing***.

TOPOLOGY (T): In computing terms, the name given to the physical layout of a local area network. There are many topologies, used with varying degrees of success some of the more notable ones being Cambridge Ring (a ring with terminals attached at various points around the circumference), Star (a central file server with terminals emanating from in starfish fashion) and Ethernet (a straight length of cable with terminals attached at various points along its length). See also ***LAN***.



• Tractor feeds allow "continuous" paper to be fed automatically into a printer

TRACTOR FEED (T): A pair of wheels bearing pins (imagine cartwheels without the outer rim) which locate in the hole-punched margins of continuous fan folded paper and help to drive it through a printer. Tractor feed is mainly used with dot matrix impact printers where the requirement is for long, uninterrupted printing sessions of program listings or mail merged letters. Using tractors to feed the paper into the printer ensures its uninhibited progress.



• TOS is the operating system employed by Atari's ST range

TOS (OS): The Operating System (often assigned the misnomer Tramiel Operating System) this is the operating system used by the Atari ST range of computers along with GEM from Digital Research.

TOSHIBA (CO.): Japanese consumer electronics company responsible for many products such as hi-fi, TV as well as the largest selling range of portable computers in the world.

TRACK (T): Before being usable by a disk drive a floppy disk must be set up (formatted) by a special utility program known as a formatter. The surface of the floppy disk is electronically divided into tracks and sectors so that data can be stored and retreived easily. See also ***floppy***, ***disk drive***, ***sector***.

TRACK BALL (T): Control device which has at its operating heart a large ball placed on rollers which, when moved, relays its position via sensors to the computer. This information is then translated into movements of a cursor, pointer, sprite etc, on screen. See also ***joystick***, ***mouse***.

TRAMIEL, JACK (P): Erstwhile owner of Commodore Business Machines and now head and owner of the Atari, Mr. Tramiel has had a long and chequered history in the computer field.

Smuggled out of Nazi Germany in the height of the war, Tramiel was taken to the USA. His business life began with the opening of a typewriter repair shop in the Bronx. The business eventually expanded to incorporate computers (VIC-20 and C64) and Commodore went on to become one of the most popular of home computer manufacturers in the world.

• Jack Tramiel: head of Atari

A contretemps in the board room led to Tramiel leaving Commodore and buying Atari from the Brothers Warner. Atari was a dead duck as far as the computer buying public were concerned but Tramiel, flexing his business acumen, soon had the company back on its feet with a new range of machines (130XE 8-bit and 16-bit ST) which became incredibly popular. Today, the name of Atari is respected throughout the computer industry. See also ***Atari***.

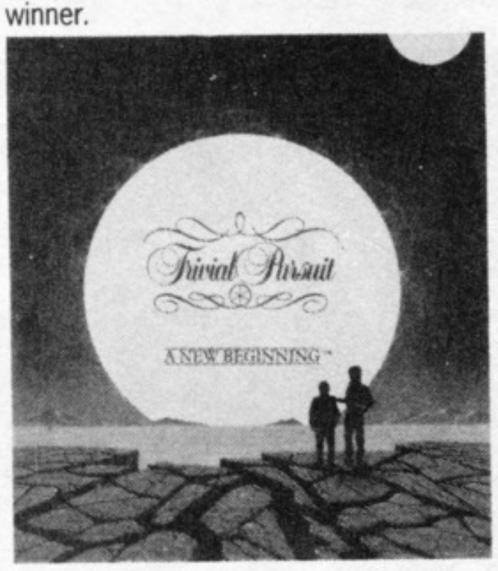
TRANSISTOR (T): A device made of semiconducting material such as germanium which is used to control a flow of electrons between two terminals: the collector and emitter.

The discovery of transistors at the Bell telephone company laboratories in the United states heralded the coming of age of the electronic general purpose computer. Expensive and unreliable vacuum tubes were quickly abandoned in favour of the use of transistors (the transition between first and second generation machines) as the basis for logic and other circuits within the computer.

Nowadays, integrated circuits house hundreds of thousands of transistors (as well as other discreet components in a package which would comfortably sit on your fingertip.

TRANSLATION (L): This is the process of turning English-like computer instructions into a form directly understandably by the host computer. The process involves each command in turn being changed into its equivalent machine instructions, then performed. Translation is slow when compared to compilation, wherein all the commands are translated into machine instructions in one go then performed. BASIC is the most notable of the translated languages.

TRIVIAL PURSUIT (G): Computer version (from Domark) of the highly popular quiz game involving a variety of questions on several topics, and – usually – a severely inflated ego for the winner.



• Trivial Pursuit: Computerised board game from Domark

TRS-80 (C): The home computer from Tandy based around the Motorola 6809 the 8-bit kid brother of the ST and Amiga's 68000 processor. Tandy sold the machine in its own chain of stores along with Tandy-produced software and manuals. After moderate sales in the early part of the decade, the TRS-80 slipped into deserved obscurity when better-specified competitors were launched into the market – usually at a significantly lower price.

TYNESOFT (CO.): Geordie software company responsible for the recent *Personal Nightmare* adventure for the ST. The game features many hundreds of 'K' of code and requires six disks.

• Personal Nightmare from Tynesoft

Key: C - computer Co - company DB - database DTP - desktop publishing G - game GG - game genre Gr - graphics Int - integrated software L - languages P - personalities SS - spreadsheets T - tech spec WP - word processor

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FUTURE FLIGHTS

Fancy a flight sim that shifts faster than movie film? That offers a 256-colour gameplay area of 2,500 square miles? That mixes multi-channel vision with digital sound and allows a multitude of users simultaneous play? Then you need Parallel Architectures'* Real Time Environment Simulator. *And £20,000

Steve Ghee, Phil Atkin, Ray McConnell and Charlie Grimsdale are all ex- Inmos employees who've recently left the company – famous for its development of the transputer – to form Parallel Architectures. Between them they are designing and building the hardware and software needed to run a simulator that'll give mainframes a run for their money.

The *Real Time Environment Simulator* grew out of their work for Inmos's General Applications Group, where they were resonsible for the specification and design of over 20 transputer evaluation boards – and other incidentals like the Helios operating system for Atari's ATW transputer workstation.

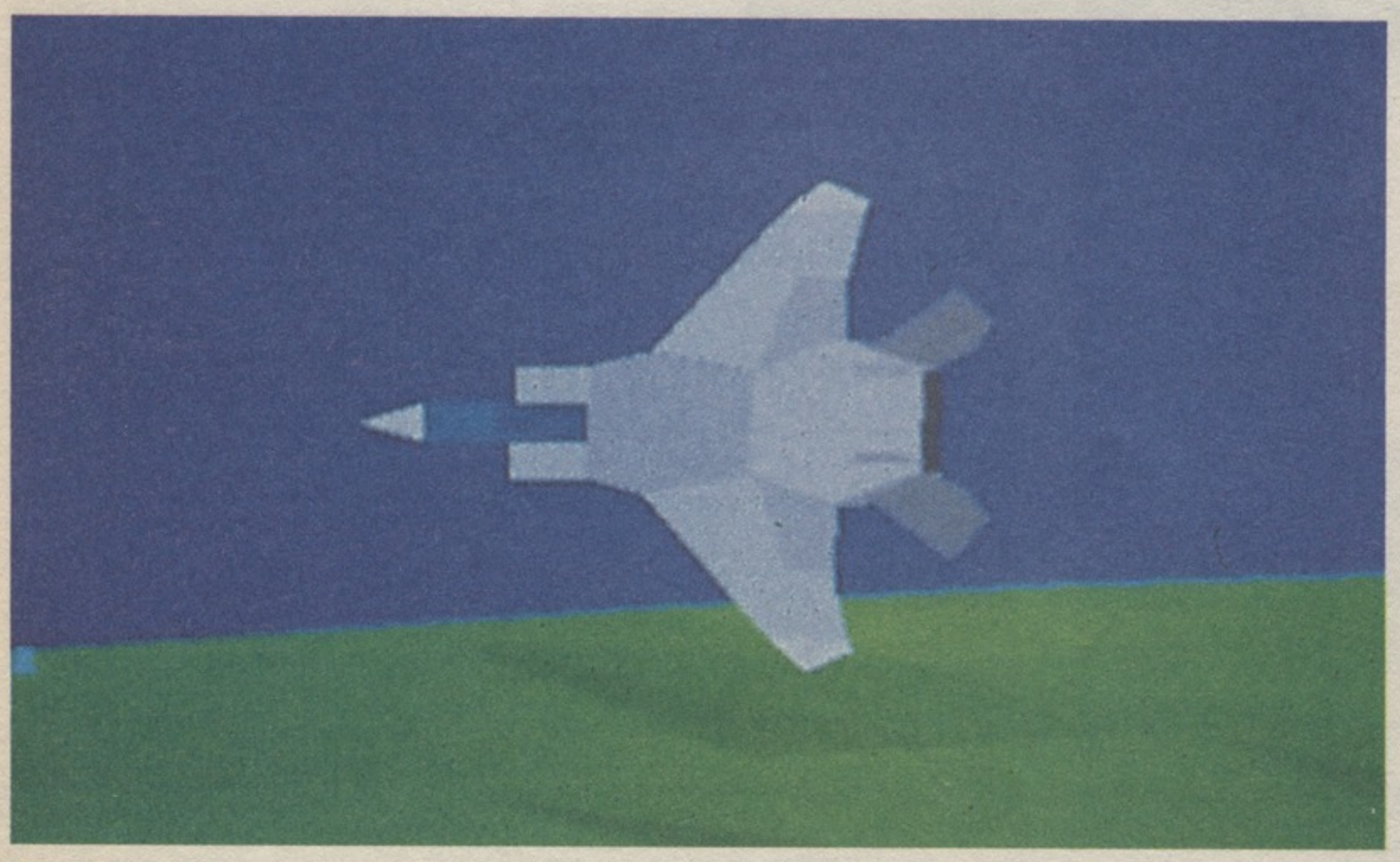
Just over a year ago, the first pictures of their flight sim hit magazine pages in a blaze of stylish glory, showing a four-player shoot-'em-up running at a very commendable 23 frames per second. Their new *RTES* now pushes those frame rates up to 34 fps, making this flight simulator demo the fastest outside of commercial flight trainers.

Five T800 transputers are used for the graphics alone – with four solely devoted to polygon shading. Altogether, *RTES* uses twelve transputers in parallel to produce a gameworld of some 2,500 square miles in which F15s, helicopters and X-Wing fighters vie for airspace over a day, dusk and night landscapes of oceans and hills.

In theory, the code – only some 60k of OCCAM – will support an infinite number of channels allowing any number of screens and users. A simple piece of wiring is all that's needed to get a room full of players up and flying. That and the custom hardware, of course.

Which is why Parallel Architectures is on the look out for commercial backing. It's already met Rediffusion, one of the leading producers of commercial sims, for discussions on mutual areas of interest and approached an as yet unnamed arcade games company. The idea here being to get multi-user arcade action into the high-streets.

As you may have already guessed, we're talking serious realism. In Parallel Architectures' words, you're talking "Interconnecting full multi-user interactive capability"



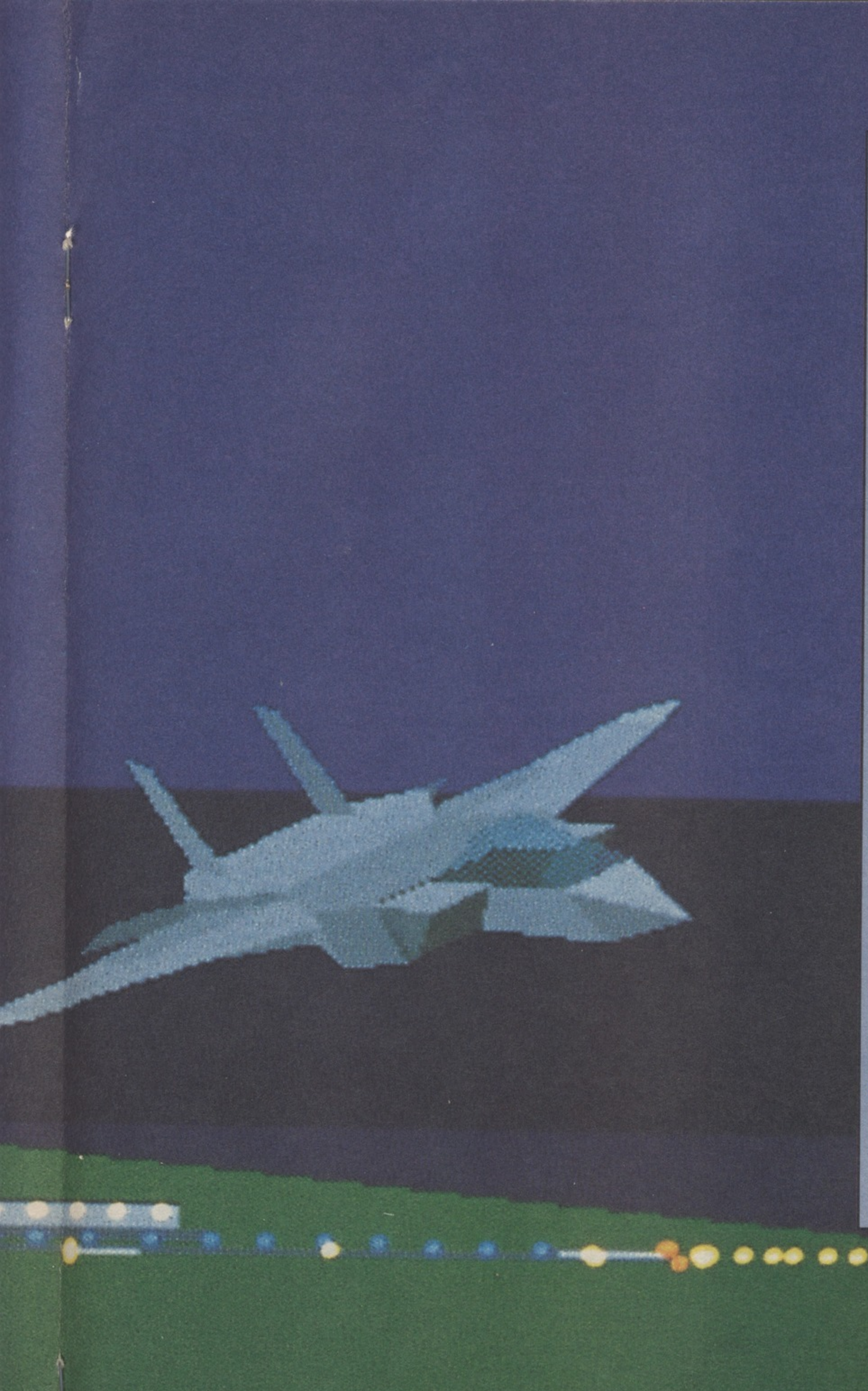
• The F-15 handles at a speed you'd expect only transputers to deliver. Each quarter of the screen has a T800 refreshing it!

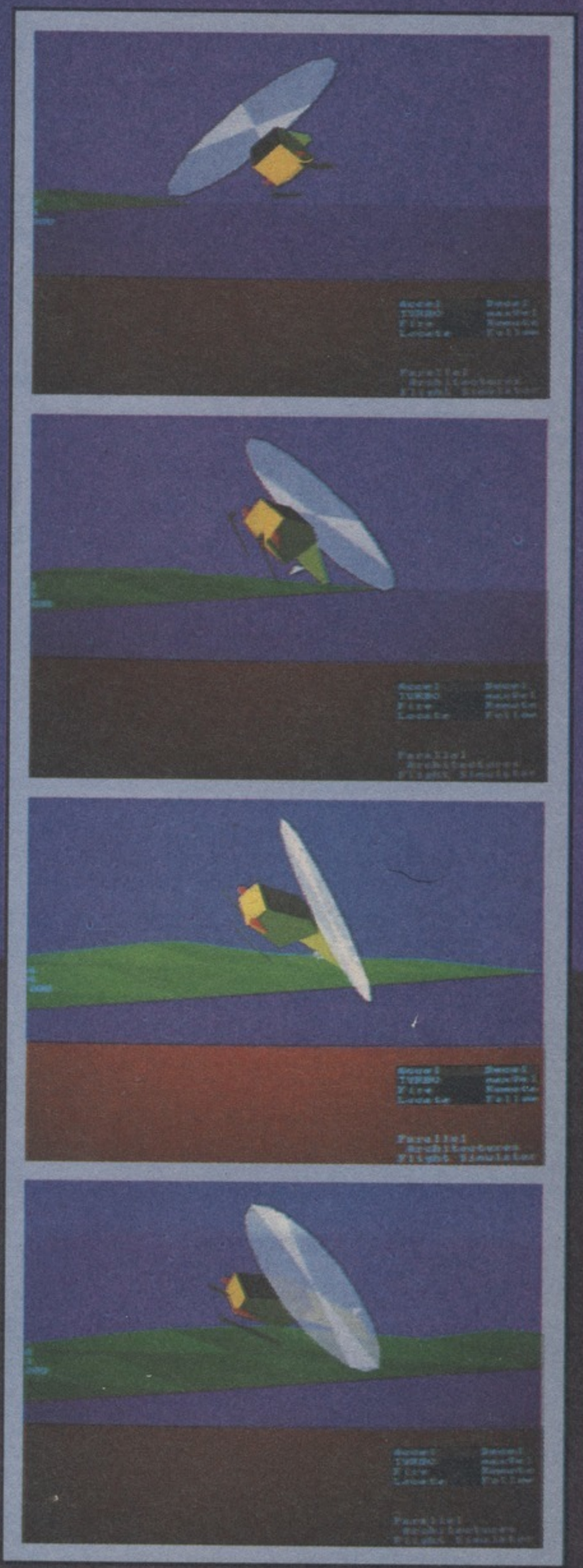
PC pilots

A variant of the *RTES* code used in the flight sim has already been implemented on a plug-in PC card, though not on PC graphics. But this is only a short matter of time. In fact, Parallel is leaving OCCAM, the transputer language, by the wayside, having plumped for C as the code that's "Future Proof". If you happen to own SUN 3, HP 9000, MicroVAX or IRIS systems you could also soon be up and away.

Ultra-tech spec

At present, *RTES* is software-based – operating at a 30Hz update and displaying up to 200 polygons across 512 x 512 8-bit pixels per channel. But the proposed full system is hardware-based and will comprise 32 special purpose modules handling everything from database models to anti-aliasing, smooth shading and texturing. Here the spec rises to 500 polygons per channel with full photo-texturing and 768 x 576 24-bit resolution.





• A couple of shots from RTES in its INMOS days. Although the flight sim only ran at 23 fps, it still approached the rate used in pilot training sims

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ST

Blood and guts

Amiga owners have an annoying tendency of leaping up and down screaming "It can't be done on an ST" every time a good game appears on their machine first. They said it about *Dragon's Lair* but now that's on its way and they said it about *Blood Money* – the classic four-way scrolling shoot-'em-up from Psygnosis.

But now we ST owners have the chance to get our own back with our version of Psygnosis's latest. They made an appalling job of the *Menace* conversion last year, so it's hardly surprising no-one's too excited – but last week I met *Blood Money*'s programmer, Wayne Smithson, who showed me three of the four levels and I can tell you it's one hell of a game.

It's almost identical to the Amiga version, where the objective was to blast away aliens who drop coins. You pick these up and go to the nearest shop to get kitted-out with a range of extravagant firepower – hence the title. At the end of each level you meet a massive guardian.

Animated aliens impressed me the most.

• **Blood Money – Better than the Amiga version.**

Swimming jellyfish pulsate menacingly in and out, and Walkers stroll up and down the floors, waiting to leap into the air if you get close. On top of this there are even some great backdrops. But there are differences. Wayne explained that some of the colours were changed and lines were occasionally shaved off of the graphics. These were ported from the Amiga version into *Degas Elite* and *Art Director*.

One thing he was proud of was the horizontal scrolling – brilliantly smooth and fast and still it incorporates all that incredible animation. End-of-level guardians are the only things to be loaded up from disk during play. It runs slightly slower than its Amiga counterpart and this makes the game easier to play. All in all we've got a good deal from Psygnosis. Full review in our sister mag *ST Format*.

Graphics the Degas way

While we're on the subject of EA's graphics package, *Degas Elite*, I have a few tips for anyone wanting to save pictures in the Amiga norm. IFF format.

Some have said it can't be done, but all it takes is for you to load a *Degas* picture into screen one so that the palette is loaded as well, view the picture and press Escape to grab the entire screen. Now go into the Block menu and save the file in a Block format. This causes a .BL? extension to be added, which is the same as Interleave Bit Map – identical to IFF.

Another tip for *Degas* owners: If you want to create a colour palette containing a smooth graduation of colour then double-click on a colour to change its RGB levels into the colour you want. Repeat this so that you have two colours in the palette set to the start and end points of the range. Now select the first colour from within the COLOURS menu and then hold down the Alternate key and click the right-mouse button on the second colour. Every intermediate colour is converted into a graduated range. Magic, eh?

ST abroad

There's a lot of good software on the ST scene abroad which we have yet to see on the UK market. Some companies, particularly those producing serious software with low sales rates, find it hard to persuade distributors to take their products. Consequently we'll probably never see some good software on the shelves here.

Packages that look particularly interesting are *Circuit Maker II* from Iliad Software and *Uni_Man* from Zadok. Iliad Software is based in Utah and its *Circuit Maker II* is causing a lot of interest amongst ST circuit makers across the pond.

The software contains a large database of resistors, transistors, chips and connectors. The idea of the program is that you can pick up all these separate pieces and link them together on a computer veroboard. What you then get is an imitation of the circuit diagram on screen – this may be output to a variety of printers.

What looks most exciting is it's claim that you can test out a circuit by applying an imitation voltage to the points and reading results in at the other end.

Iliad Software can be contacted on 0101 801 226 3270.

Uni_Man is the other good-looking piece of software, this time for MIDI enthusiasts. It comes all the way from the Netherlands and is aimed at any serious MIDI users who wants to create their own manager/editor for any MIDI equipment.

Uni_Man is perfectly compatible with all the major sound/patch data file formats such as *Dr. T's* and looks like one to watch out for.

Call Zadok on 010 31 70 200 209.

Kim Harmagh

Red-hot Skweeks

US Gold recently released Skweek – a fun adventure which has you guiding the furry orange hero around a maze turning blue tiles to pink. It's so addictive I've been playing it for weeks, but its primary audience is children.

The only bad point is its annoyingly squeeky-clean image – but Skweek's reputation was ruined recently when US Gold received a complaint from one of its teenage customers. He said he felt a warning sticker should have been placed on the game "like they have on offensive records or videos."

It seems a pirated ST copy made its way into WH Smiths. After level 40 Skweek's speech bubbles turned a seedy shade of red as he let out a string of abusive language. US Gold says it's rectified the problem, but then it would say that, wouldn't it?

However, they are looking out for anyone with a dictionary of rude words and a 68000 programming manual.

AMIGA BLIT

Music-X arrives at last!

After we've had to wait for what has seemed an eternity, the Amiga MIDI music package that everyone has been talking about has finally arrived.

For almost a year, *Music-X*'s existence in the UK has hung in the balance as a result of legal wrangles between the US author, MicroIllusions, and its former UK distributor, Activision.

Thankfully, it seems that the two sides have come to an agreement and the contract between Activision and MicroIllusions has been dropped. MicroIllusions, in a press release sent out to UK and European distributors and Press claims that both sides have mutually agreed to allow the agreement to expire and as a result, all MicroIllusions' products will be handled by its UK office in Huntingdon, Cambridgeshire.

Thanks to those rather nice people at SDL, I was able to get my hands on a copy of the program as soon as it was "legally" available and I have been playing with it for a couple of days now and I can say that I'm very impressed by its capabilities.

Music-X uses the familiar "tape transport" type controls that are used extensively in the vast majority of MIDI sequencers. The program offers a full 250 tracks (which is considerably more than the program's nearest rival) which can contain 16 MIDI channels' worth of data including System-Exclusive and polyphonic aftertouch.

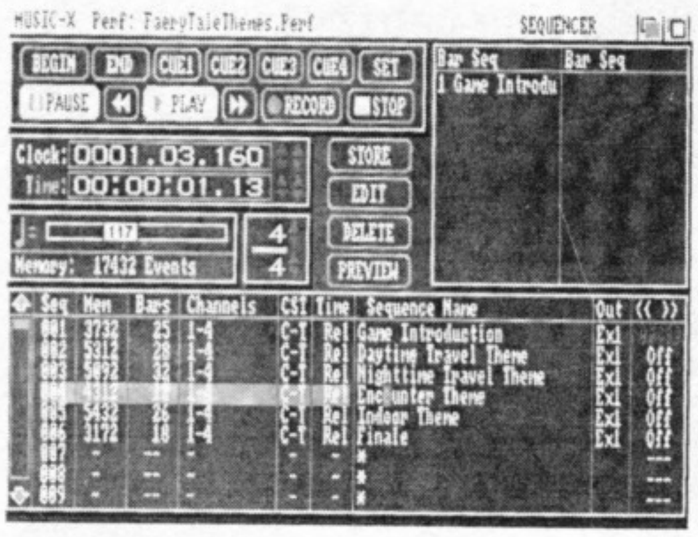
Music-X offers extensive editing facilities such as step-time and real-time editing using either a bar graph or the more conventional text-based MIDI event display.

This is where most similar programs usually stop, but *Music-X* offers a lot more besides. For starters, there's a complete MIDI patchbay that allows you to filter and redirect all types of MIDI data from one channel to another.

For the storage and manipulation of System-Exclusive data, *Music-X* offers a Librarian page that can be taught to communicate with just about every MIDI device under the sun. As an added bonus, the program also includes free patch editors for the D50, DX100 and the TX81Z.

These patch editors alone, if bought separately, would set you back £100 a piece and so *Music-X* really is phenomenal value at £229.

For further details of *Music-X*, contact Andy Leaming at SDL on 01 309 1111.



• The Music-X sequencer page offers a full 250 tracks of real-time recording

Sculpt update

After the success of the *Sculpt* range of products, Byte by Byte has announced the release of *Sculpt 3DXL*, an enhanced version of the original *Sculpt 3D* program.

At the simplest level, *3DXL* is a vastly turbo-charged version of *Sculpt 3D* which offers rendering speed increases over its predecessor between 300% and 800%. The program also offers a new "CSG Spheres" feature which allows you to render images like *The Juggler* in minutes instead of days.

Unlike the original *Sculpt*, *Sculpt 3DXL* offers full support for the 68020/30 processors and 68881/2 maths co-processors, therefore allowing even faster render times. As an added option, the program can also produce 24-bitplane images which can be displayed using an incredibly expensive, but very impressive frame buffer.

Message port

If you have any views on any issues raised within AmigaBLIT, or indeed the Amiga scene in general, then why not put pen to paper and send them into AmigaBLIT. Similarly, if you have any great tips, tricks or cheats that you think may be of interest to Amiga owners, then I'd love to hear from you. The address to write to is: Jason Holborn, AmigaBLIT, New Computer Express, 4 Queen Street, Bath BA1 1EJ.

Sculpt 3DXL costs £129 and is available from the Amiga Centre Scotland, which can be contacted on 031 557 3260.

Hey SEUCKers!

After having to suffer stories of pirated beta-copies and corrupted data disks, Palace has finally released its Amiga version of the popular Commodore 64 utility, *The Shoot-Em-Up Construction Set*.

For those of you who have never seen *SEUCK* (where have you been?), the program allows you to create your own arcade games with ease from within a nice friendly menu-driven environment.

SEUCK comes complete with three demo games which show off what the program is capable of. Of the three, probably the best is *Blood and Bullets* which is an 18-certificate *Commando*-type game with plenty of blood and guts flying about.

Creating a game is simplicity itself and you can quickly knock up games in no time at all. For users who wouldn't know a BASIC keyword from an assembler directive, *SEUCK* provides all the tools that who would ever need to produce simple arcade games. However, don't think for one minute that you'll be able to produce a marketable game using *SEUCK*, as *SEUCK* games will undoubtedly stand out a mile. For a full review, see page 8 of this issue.

C it, believe it

The books for techies just keep on coming. Abacus, which produces probably the largest range of Amiga-specific titles, has just released a new title aimed at C programmers.

Amiga C For Advanced Programmers details how compilers, assemblers and linkers work as well a providing an in-depth look into the subtle art of user interface programming using *Intuition*. As a sort of freebie, the book also includes a complete C listing for a text editor which must be typed in (using a text editor!) and compiled. The book costs £24.95 and is available from all good bookshops.

Jason Holborn

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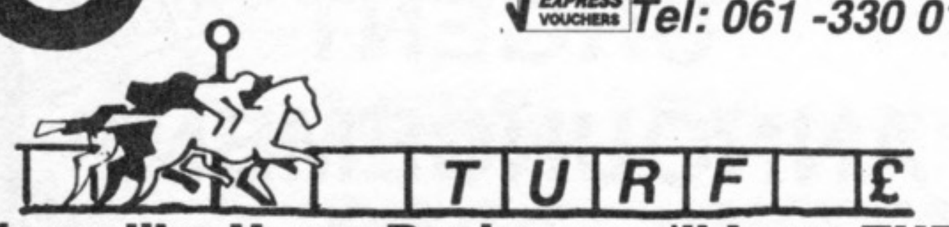

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PC UPDATE

For EISA jolly good fellow

The much-heralded alternative to IBM's MCA architecture seems as if it might eventually get off the ground.

The Extended Industry Standard Architecture (EISA) offers many of the same benefits as MCA, but retains compatibility with the original PC bus through a system of double depth expansion sockets. This means that an EISA machine can take current expansion cards as well as new 32-bit ones which are promised for the future.

EISA is being promoted by a conglomerate of PC and chip manufacturers, including Compaq, Hewlett-Packard and Intel. The last of these announced an EISA support chipset last week, only nine months after the EISA standard was first mooted. EISA machines are promised from several manufacturers, though the original enthusiasm for the standard seems to have waned as several of its original supporters have defected to MCA.

A letter

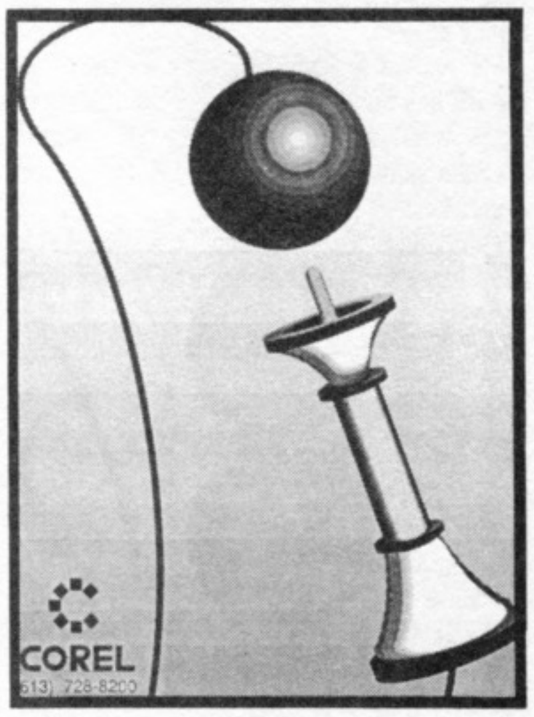
Yes, I've had one. Thunderous applause and street parties ordered throughout the land. It comes from Darren Bush, one of the PC industry's most prolific scribes (second only to Bill Poel of Paperback Software) and concerns an item in a *PC Update* from a few weeks back, about memory between 640K and 1Mb and how to make better use of it.

Darren extols the virtues of *QEMM*, the EMS driver supplied by QuarterDeck as part of its *DesqView 386* multi-tasker. It is indeed an excellent product and can reallocate the little holes in the memory map to the spare 386K of memory in question. However, this wasn't what I was on about.

What I want to do, and think maybe *QEMM* can still handle, is to allocate the 384K of *physical* memory to a position above 1Mb in the memory *map*. In this way, you could have a full 384K of EMS expanded memory on a 1Mb PC, with physical gaps in the 640K-1Mb section where your configuration suggests they should be. Grabbing an extra 112K or so of "high" memory for use by TSRs is useful, but for some applications the EMS would be a lot more handy.

Laser repeat

People who use laser printers often have to wait several minutes to get a graphics page out of them. This is because up to 1Mb of data has to be transferred down the printer cable and made up into an image of the page by the processor in the printer. If you're printing a proof copy to check layout, before running off half a dozen, it can be very frustrating if the proof turns out to be correct. You still have to go through the same wait for page makeup before the first of the six copies can be printed.



• This dump from Corel draw took over 11 minutes to produce. It would be 22 minutes if you need to take a proof copy first, though

Even though the image of the draft copy is still in the printer's memory, there doesn't appear to be any way to send it to the laser head again without remaking the page. I would certainly value this facility, and I guess many other laser users would. Anyone know how to do it, or know of a gadget that will help?

Plus 2s are in

The best pop-up word processor on the PC is due for a further facelift in September. That's when *TopCopy Plus 2* hits the streets, complete with snaking columns and font handling for DeskJets and Lasers. This fast all-British word processor already offers features way above its £100 price tag, and is the vehicle on which this very column is produced each week.

The new version will offer today's breed of low-cost laser users compatibility with the extra fonts available in their printer's plug-in cartridges. With a bit of work, it should also be able to cope with downloadable fonts out of a product such as *Typographica*. Could be just the job for those who don't want to go the whole hog with DTP, but could still use decent headlines in their documents.

Price will be £160, including VAT, and you can talk to Toplevel Computing, the new marketing arm of Innova software, on (0453) 835485.

Feedback

As a loyal, yet poorly-paid contributor to the world's best weekly computer mag, I feel I must respond to the intelligent and constructive criticism made about this column in our recent reader survey ("I SAY!", Express Mail, Issue 36). Up yours, matey!

Simon Williams

Hang on a ParSec

If you glance at the worthy ST Format, *produced in another corner of this building by Richard "I-Can-Make-It-Onto-The-Cover-Of-More-Future-Mags-Than-Any-Other-Dude" Monteiro, you'll have noticed occasional mention of a super-high-resolution graphics add-on for that machine called ParSec.*

This handy little board, based around the TMS 34010 chip from Texas Instruments, offers lightning-fast pixel processing in up to 16,777,216 colours at a top resolution of 1,024 x 768. It can handle up to eight colour planes and sports RS232 and SCSI ports as standard. Software under development includes a professional painting program which aims to compete with dedicated systems such as the Quantel Paintbox.

Why am I telling you all this in a PC column? A PC version of the board squeezed onto a PC expansion card is planned and would quite cheerfully knock the spots of many of the high quality graphics/DTP cards currently available. The best thing about the ParSec is that the ST version, complete with on-board power supply and various other bits and pieces that a PC version wouldn't need, will cost £799 plus VAT. A PC version should be cheaper.

If you'd like to show your interest in a PC version of ParSec, give Elmtech Research a ring on 021-472 5719.

CPC centre

What a gas

Was there ever a game on the Amstrad, John Hoopkins of London incredulously demands to know, called *Passengers on Wind?* I can see why you might have your doubts, John, but not only was there a game of that name, and jolly good it was too, there was even a sequel (as you'd expect, disappointing) called – that's right – *Passengers on Wind 2.* Someone at Infogrames was responsible for dreaming up that dubious title.

If we weren't all so grown up round here we could have a competition for the most dubious game title of all time. But of course we're far too responsible, aren't we?

Entries to: *This One's Got a Dubious Title, Steve Carey, NCE,* 4 Queen St, Bath BA1 1EJ. There are mystery software prizes (i.e. I haven't a clue what to give you yet) for the best entries.

MGT disc drive for CPC

You may not have read too closely the review in last week's *Express* (p.10) of the Miles Gordon Technology disc drive, since the CPC was not mentioned. I'm reliably informed, however, that this was an oversight. Take another look...

C'est magnifique!

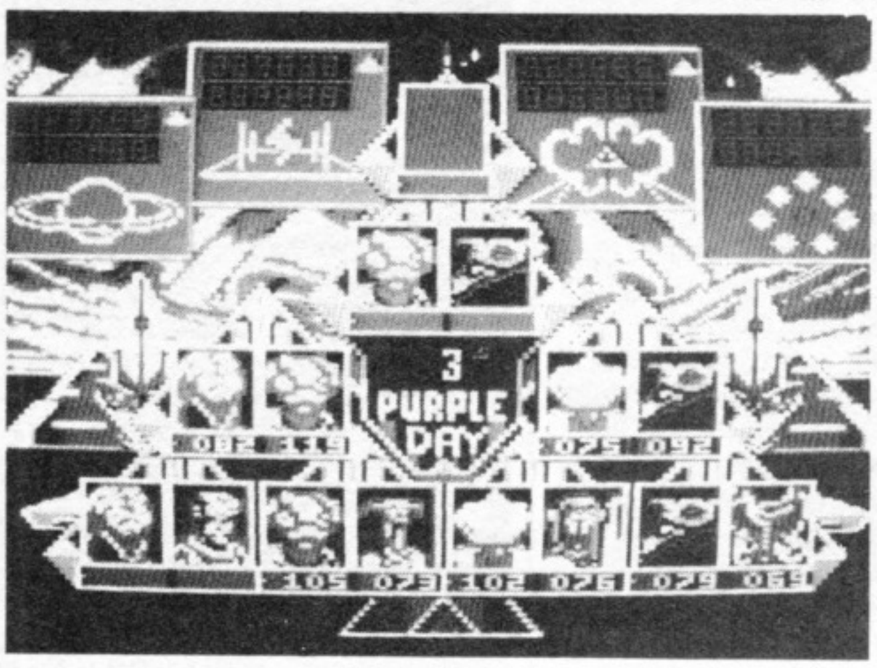
I should like to apologise publicly to Rod, the unfortunate chap whose job it is to chase me for this column every week, and to everyone I said I was going to write to, phone or get back to this week.

The reason is Exxos' *Purple Saturn Day.* Exxos (parent company: Infogrames of France), you'll remember, was the company responsible for last year's rather splendid *Captain Blood,* which had you attempting to communicate with aliens. Now the Captain's nephew, according to the game scenario, is the brains behind the institution of Purple Saturn Days, a festival to celebrate the one day in the year on which Saturn turns purple *(hence, I suppose, the name – ed).*

PSD is without doubt the best looking game to appear on the Amstrad in 1989. There are four separate elements to the game, and each could quite easily have been released on its own.

You commence, for instance, on the Ring Pursuit, an astonishingly fast race round the rings of Saturn that stretches your nerves, reactions and joystick to the limit and beyond. (Don't expect Exxos to pay for your knackered 'stick, by the way. Just buy a tougher one next time.)

I haven't time to go into each of the other three games (the Trionic Slider Test, the Brain Bowler – my own favourite – and the Time Jump) but I predict that "This one will run and run" (Steve Carey, *New Computer Express).*



Purple Saturn Day should be in the shops now, priced at £15 on tape and £20 on disk. It sounds a lot, but that's only because it is. Worth every penny.

Steve Carey

Living Daylights

With the latest James Bond adventure Licence to Print Money *(shome mishtake shurely? – ed) just about to hit a CPC screen near you, John Collins of Handsworth is still having trouible with* The Living Daylights! *"Any pokes," he asks, "hints, maps – anything? I'd be very grateful!"*

Well it so happens I have some tips as compiled by Neil Hackney of Macclesfield. He hasn't cracked levels 7 and 8 yet – anyone out there able to finish Bond off?

● Level 1 – Gibraltar

Forget about the SAS. Just run to the end and change your gun to Walther PPK. Now shoot the man who appears when the screen won't scroll any further. Your score will increase by 50, at which point you should run off the right hand side of the screen.

● Level 2 – Music Conservatory

Forget about the men who pop up and shoot at you: just keep running, jumping and rolling to the end of the level.

Weapon – night vision glasses

● Level 3 – The Pipeline

Just run. Jump the pipes on the floor. To get past the high pipes, roll just as the line of pipe is about to touch his head. Forget about the falling pipes as they usually miss you anyway.

Weapon – Hard hat

● Level 4 – The Mansion House

Forget the helicopter and the men who shoot at you. Just shoot at the first milkman (by selecting and using the bazooka you need only shoot the milkman once), and then run on the next milkman. As soon as a milkman appears at the edge of the screen shoot him. When all three milkmen have been shot run to the end of the level.

Weapon – Bazooka

● Level 5 – The Fairground

Quickly get the weapon you selected and get the target about half way along the screen and at Bond's head height. Shoot the balloons as they come onto the target, then shoot the man.

An alternative way of doing this level, if your energy is quite high, is to shoot the man with the Walther PPK straight away and run through all the balloons to the edge of the screen.

Weapon – Crossbow

● Level 6 – Tangiers

No sweat. Shoot the men who throw the long grenades at you and jump the gaps. Forget about the men who shoot at you.

Weapon – Dart Gun.

If anyone has succeeded in finishing Levels 7 and 8, drop me some hints to: Steve Carey, CPC Centre, NCE, 4 Queen St, Bath BA1 1EJ.

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SPEX

Tempting type-in

Here's another one of those incredibly useful yet amazingly compact routines I indulge you with from time to time.

This mere 14-line slip of a program comes to you from crack coder Dave Gosnell, who writes a well liked technical column for the equally well liked *Spectacular* fanzine (30p + SAE to **Rich Pelley, 32 Abbey Rd, Westbury-On-Trym, Bristol BS9 3QW**), and thrilled us with his expert knowledge of extended BASICs a few issues back. Known only as *The Amazing Display Synchroniser* and weighing in at a tiny 15 bytes it is a major contribution to flicker free graphics. By inserting the routine into a program and calling it directly before the bit that prints the graphics, all the visuals in your masterpiece will be transformed into beautifully smooth flicker free ones. Enough waffle, bash it in 'till your Speccy pleads for mercy...

Comm-ic relief

For some reason the doubtlessly wonderful world of comms has seemed to pass me by, and it's probably got more to do with phone bills larger than the national debt of Brazil rather than the threat of on-line porn which has kept me away.

I've never been a spoilsport though, and am quite happy to plug Bulletin Boards which have good Spectrum coverage. So if you're a SysOp or comms enthusiast, chuck all the relevant details in the direction of Robin Alway, SPEX, New Computer Express, 4 Queen Street, Bath, BA1 1EJ.

```
10  FOR N=45056 TO 45070
20  READ A
30  POKE N,A
40  NEXT N
50  DATA 245
60  DATA 197
70  DATA 58,120,92
80  DATA 71
90  DATA 58,120,92
100 DATA 184
110 DATA 40,249
120 DATA 193
130 DATA 241
140 DATA 201
```

Jump start the whole thing by typing **RANDOMIZE USR 45056**, or **CALL &B000** for those of you watching in machine code. Dave did warn me about a few bugs which miraculously spring to life when using the program; for starters random numbers generated in BASIC will not be tolerated and, for some reason, graphics at the top of the screen can become invisible. Still, you can't have everything.

Scotch must

Spectrum adventurers have a pretty bad time of it with, very few of their favourite game type being commercially released for our wadge of designer plastic these days.

The solution lies in the mystical land of indie adventures, where loads of smaller companies are happily churning out home-made games. One company which churns out some of the best is Tartan Software and its latest – *The Gordello Incident* – is a real treat for new recruits and old hands alike.

The game takes on a novel split-screen approach as you guide two separate heroes to try and thrawt an evil, and no doubt balding – they usually are – mad scientist from taking over the world. I've only managed to sneak a small go so far but can definitely confirm it's more than a bit different to the usual GO NORTH, DECAPITATE TROLL type of adventure, with loads of computer controlled characters (14 to be exact), the unique split screen control, toupé-tearing puzzles and most importantly good value for money – you get three loads for a reasonable £3.95 (inc P+P). If you want a more detailed analysis check out issue 17 of *Spectacular*, due out August/September/when everyone gets back from their hols, (price and address above) where my identical twin will be reviewing it.

In the meantime, rush your orders to **Tartan Software, 61 Bailie Norrie Crescent, Montrose, Angus, Scotland, DD10 9DT**.

Disk duplicator desired

You may remember me bemoaning the lack of a +3 disk version of the highly acclaimed, by me at least, 128K users mag *Enigma*.

Well Hamish Rust, Editor of the esteemed organ, has written to say that whilst a +3 *Enigma* would be nice he might find it a little difficult to do, not actually owning one of the machines.

This is where you come in. Hamish urgently requires a reliable +3 enthusiast who wouldn't mind performing the fairly painless task of transferring each bi-monthly issue of *Enigma* onto 3" unfloppy disk. And now that Uncle Al has gone down the shops and bought 6 million new CF2 disks, at least you won't have any problems with shortages! Your services need to be offered free of charge, although obviously you wouldn't be left out of pocket.

Prospective duplicators can get in touch with Hamish at **15 Westfield Road, Inverurie, Aberdeenshire, AB5 9YR**. One huge advantage for anyone who decides to take up the post is a guaranteed free subscription!

Batty

With the shops no doubt just about to be overrun with Batshirts, Batposters, Batshoes and Bat Y-Fronts, it comes as no surprise to see Ocean has the licence to potentially one of the biggest box office takers of all time, *Batman – The Movie*.

Unlike Superman, Batman is a superhero who's survived computerisation surprisingly well, and the two Batman games that Ocean has given us so far are excellent. The movie licence will probably be the hardest to pull off as it'll have to have more than a passing resemblance to the real thing, unlike its predecessors, which were stand-alone affairs.

• Will the Caped Crusader be the one to finally knock Robocop from the top of the charts?

Latest reports suggest three levels of action, each based on a major scene from the film. With the hype surrounding the film before its release, Ocean may well have found a game to finally knock its very own *Robocop* off the top of the charts.

Robin Alway

SECTOR 64 SECTOR

128 dead?

In the near future we may be doing an article on the progress of the 128. The computer itself might be no more, but it's still alive and kicking in the hands of its owners, who probably use it as a customised C64.

But is anyone doing anything interesting with the machine? For example, creating different screen effects using the 2MHz clock, or anything else that's breathtaking and which the C64 can't do?

Something really interesting about the 128 is the amount of software there was to use when you bought it – unfortunately, they don't make them any more. Things like the CPM mode, for example. But the most impressive feature is the fab BASIC and sprite editor. That wasn't all, as you also had a built-in 6502 machine monitor, handy to program and debug programs. If you have a 128, what do you use yours for? Why not write in and tell us.

Oops!

An apology to Andrew McWhinne for making a right boob of his file recovery listing (issue 34). Lines 40 and 50 of the "old" routine should have read:

```
40  DATA 160,1,169,255,145,43,32,
    51,165,24,169,2,101,34,133,45,169
50  DATA 0,101,35,133,46,72,94,166,0,0,
    0,0,0,0,0
```

Ian + Mic

Text fader

This week we have another interesting and useful little listing which fades all the text on the screen to nothing. If you want to get it back again, just hit the space bar.

```
10  B=49152
20  FORL=0TO90:READA:POKEB+L,A:NEXTL
100 DATA 120,169,51,133,1,162
110 DATA 0,189,0,208,157,0
120 DATA 56,232,208,247,238,9
130 DATA 192,238,12,192,173,12
140 DATA 192,201,64,240,3,76
150 DATA 5,192,169,208,141,9
160 DATA 192,169,56,141,12,192
170 DATA 169,55,133,1,88,169
180 DATA 30,141,24,208,96,162
190 DATA 9,169,0,157,0,56
200 DATA 157,0,57,157,0,58
210 DATA 157,0,59,157,0,60
220 DATA 157,0,61,157,0,62
230 DATA 157,0,63,173,54,192
240 DATA 24,105,55,141,54,192
250 DATA 96,96,96,255,0,255
300 SYS49152
310 GOSUB1000
320 GETA$:IFA$=""THEN320
330 SYS49152:END
1000FORL=0TO255:SYS49205:NEXTL:RETURN
```

If you type SYS 49152 and enter it the computer will reset the fade to the start. If you then put SYS 49205 through a loop 255 the text will fade out.

To get the best results from this program you could fade the text out doing a GOSUB 1000, and once the text can't be seen display the next page of writing onto the screen. You will not be able to see the computer display the text. After you have displayed the text, typing SYS 49152 will make it appear instantly.

ATARI 8-BIT ANTICS Roadshow

And the winner is...

I've had a very positive response for the competition I set last time. After much deliberation, the joystick and immense honour of publication goes to Gillian Catling of Norwich for her review of the Paul Woakes hardy perennial *Mercenary*. Well done Ms. Catling, the joystick is winging its to you at this very moment. And here is Gillian's review:

● The game begins with a spectacular collision with the planet of Targ. You freefall through the atmosphere down to the planet's surface and after getting your bearings, Benson tells you where you are, what's around you and what you can do. Benson is a new generation of personal computer, who accompanies you everywhere and offers advice. Targ is inhabited by the Palyars and the usurper Machanoids who are waging war against each other to gain control of the planet. To escape from the planet of Targ you must gain enough cash and valuables etc to purchase a spaceship. To this end, you can join one of the warring factions or choose to be independent. Of course joining one side means that the other side will do its best to get rid of you – so proceed carefully.

The surface of the planet is covered with buildings, metal towers, bridges and other structures which you can fly under and around. There's also a vast underground network of rooms just waiting to be explored.

Graphics and sound are superb, animation breathtakingly fast and the plot is addictive. A very good game.

Tip for the top

The prolific Rob Berry of Nottingham has sent in a tip for those of you still using Atari DOS version 2.0. This DOS has several bugs, with the most notable being that associated with the read and write routines. After a file is opened the data write operations work correctly but the read operation is bugged. To correct your copy, boot DOS then type in these pokes: POKE 2592, 130, POKE 2594, 73, POKE 2596, 240, POKE 2598, 106, POKE 2625, 16, POKE 2593, 19, POKE 2595, 12, POKE 2597, 36, POKE 2599, 234, POKE 2773, 31. After making the pokes, save you DOS back to disk.

Keep those tips rolling in, folks.

New releases

Atari has put together several summer releases. I haven't had a chance to play all of these yet, but here goes with some previews.

The best of the new releases is the graphically excellent *Cygnus X1*. The Emperor of Cygnus is planning an offensive against the Earth in a bid to take over the planet and the galaxy. To stop the Emperor you take control of an experimental police fighter craft. The game features lots of colourful scrolling graphics and plenty of fast action.

There's *Heartache*, a vertically-scrolling shoot-'em-up set in a genetic spacelab; *Tiger Attack*, featuring you flying over various Pacific islands bombing the Japanese; *Black Lamp*, featuring daring and romance in a kingdom of evil and *Speedhawk*, another scrolling shoot-'em-up with you as the speedhawk clearing the planet Tintagel 4 of mutant droids.

Edmund Blake

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ATARI

PCW PATCH

Game points

Last week I recommended some 'traditional' PCW games like *Chess* and *Scrabble*. There are plenty of other types of game though. You could try *Starglider 2* (£24.95, Rainbird 01-240 8838), a game which is familiar to owners of other computers, or *Academy* (£19.95, CRL 01 533 2918) both of which are a mixture of shoot-'em-up and exploration.

Sports fans have a wide range of games available: *Brian Clough's Football Fortunes*, a football management game, *Graham Gooch's Test Cricket* (originally from Audiogenic, now try Alternative on 0977 795544), *Matchday II* (£14.95, Ocean 061 832 6633) a sort of computerised *Subbuteo*, or *Head Coach* (£15.95, Coda 01 789 9551) an American Football management game.

I'll round up a few adventure games next week.

Tetris

Mirrorsoft's Tetris is a great game but has more holes in it than a packet of polos. Try entering your name in the high score table as control codes – i.e. [EXIT] followed by various letters. When it tries to print out your name it ends up clearing the screen, splitting into two halves, doing all sorts of things. Press [EXIT]M though and you can reverse the screen back to its normal colour, which Tetris omits to do when you quit normally!

Pardon?

Derek Lilly of Clevedon sends me some snippets by Chaucer (Chancre) "corrected" by *LocoSpell*.

Here's a bit from *The Pardoner*, which in Chaucer's version is:

Well koude he rede a lessoun or a storie
But alderbeste he song an offertorie

But after the ministrations of *LocoSpell* it reads:

Well KO'd he red a lesson or a stogie
But alertest he song an offender

Wonder what Prince Charles would have to say about either version?

He also, parenthetically, expresses relief that there are so few games for the PCW, as it might lead to us being "tarred with the same brush" as other computer users!

Derek is always careful to say "I have a Word Processor" rather than "I have a computer"!

The happy prints

Suppose you want to print out a file but edit it as well while it's printing – a common enough occurrence, as you always start to see those errors when the paper rolls off the platen!

The thing to do in *LocoScript* is to copy the document to the M drive and print that as usual (P from the Disc Manager). Then edit the version on disc that you've just copied; you can make changes and corrections as the document prints out.

In *Protext* you just have to print the document with background printing as usual and wait for the a> or b> prompt to reappear – then you can edit the document.

Basil Pigg

QL corner

QEP III EPROM Programmer

QJump's QEP III EPROM programmer was originally designed by Tony Tebby of QJump for his own use – his popular *Toolkit* is mainly supplied in plug-in EPROM cartridge form.

QL repairs

If your QL has died, TF Services provides an efficient repair service, at a reasonable price. Excluding Microdrives, there is a standard charge of £25, including return postage.

TF has acquired one of the Thorn EMI test rigs, so machines, once repaired, should conform to the original Sinclair specification.

A typical turn round time is one working day. TF is on 01-724-9053.

The QEP III looks like a conventional QL expansion unit, plugging into the expansion port on the left of the machine, except that a Zero-Insertion Force (ZIF) socket is mounted on the top of the cover, into which is inserted the EPROM to be programmed.

A wide range of devices can be programmed, ranging from the 2716 2Kb EPROM, up to the 27512 chip, which holds 64Kb.

The QEP III is very easy to use. The software is menu-driven, and the whole package has been used successfully by various *Quanta* members with little knowledge of microprocessor hardware.

With the QEP III plugged into the QL, you obviously cannot use disk drives at the same time. One solution would be to use a 2-way expander, but most users simply buy a second QL, and network it to their disk-based system.

Using the RS-232 port on the QL, the QEP III could be used to program EPROMs from software developed on another machine, such as a PC.

The QEP III is good value at £121.90, from Care Electronics. Even if you add to this the cost of a second QL machine, the combination is still very much cheaper than a dedicated EPROM programmer with comparable features.

Care can be found at **800 St Albans Road, Garston, Watford, Herts, WD2 6NL**. Tel: (0923) 672102.

John Torofex

Biorhythms

I see from the ads at the back of QL World that someone is selling a biorhythm program for the QL.

Whilst this is probably a perfectly good piece of software, I would have thought that most QL users are too intelligent to waste their money on something that can best be described as superstitious nonsense.

The whole basis of biorhythms (and astrology, for that matter) is the date of one's birth. Surely the date of conception would make more sense?

Also, the choice of a sinusoidal function seems rather arbitrary, and I suspect that it was chosen because it is easy to calculate.

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BEEB BOX

Calling all bugs!

Everyone if familiar with Murphy's law: *"If something can go wrong it will. If it goes wrong it will be at the most inopportune moment"*. And so on.

Alien concept

As promised last week here are some thoughts on the Electron version of Predator, *for which thanks go to Matthew Fifield.*

The gameplay and graphics help to make the atmosphere quite convincing, while the parallax scrolling works quite well and is only just slower than on the BEEB.

Sprite animation is also speedy, and sound is used to good effect, but can be turned off if necessary.

A helpful tip is to remain still while the Alien scans the area – it might just miss you. The birds are extremely difficult to dodge, and are best shot down.

My lives ran out all too quickly at first, but I had to keep trying if only to catch a sight of the Alien.

However, there appears to be a peculiar synergy between bugs in computer programs and the above said Murphy's law.

For example, when you first start to use a package you are very careful with it. This is generally because any application of any size is complicated and many mistakes are possible.

But Murphy's law remains dormant, waiting for you to become confident and careless. Then it strikes, usually late at night when you're doing that last Save before going home. Bingo! – corrupt data and a wasted day.

This happened to me last night using a package costing no less than £695. Not a BBC program, I hasten to add. That brings me neatly to the subject of this discourse, and that is: Are the programs you use every day bug-ridden, and do the software houses care one jot?

The idea is that you, gentle reader send in your experiences, anecdotes, bug fixes etc to me C/O *New Computer Express*. I will, in return give a prize for the best/most amusing entry consisting of recently reviewed software, including a bumper bundle from Superior.

I will also take up the cudgels on your behalf if you're not getting satisfaction from recalcitrant software houses.

8-bit Archie

Running BBC software on the Archimedes has never been an area of interest for me. It seems, as First Officer Spock would say, "Illogical".

However, there are many situations where you could have to convert your software. So here are a few pointers for what to expect. Remember, the ARC is ADFS only so DFS software will need alteration.

Also, the Arc needs to have its directories explicitly set up for the application running. Use environment variables such as Configure$dir.

And finally, remember there are two BBC emulators, *!65Host*, and *65Tube* to play with.

Andrew Brown

MSXTRA

Nemesis!

If you read last week's column, you may remember that I was undecided as to which game out of *Robocop*, *Rambo 3* or *Nemesis 3* was going to be next for review.

Well, after a brief look over, I'm afraid *Rambo* and *Robocop* got the elbow – *Nemesis* has hardly been off my machine. *Nemesis 3* is of course a shoot-'em-up presented in the same fashion as the previous *Nemesis* releases. The difference with version 3 is that it has more of everything.

New games

New titles to look out for include Barbarian *by Melbourne House – price £9.99, and* The Munsters *from Again Again – £9.95. Army Moves and Game Over are now available on the new budget label Image, and at £2.99 quite a bargain. Titanic on the Kixx label is also available now – another game written by Spanish software house Toposoft – priced at £2.99. Joe Blade from Players is another budget title to look out for at £1.99. All in all, a good month for new budget games.*

Firstly, it's supplied on a 2 Mega ROM (256K), and contains a special 8-voice polyphonic sound chip, more of which later. All you have to do is slot in the cartridge, just sit back and watch the five-minute intro which explains your mission.

Next it's on to the game, and here you have a choice of four ships, each capable of using a different set of weapons. You also have a choice of "Options" and can choose between shield or force field.

Only now do we get to blast things, and as in the previous *Nemesis* games, destroy certain enemy ships, and a power pod is left behind for you to collect. Each pod collected gives you a choice of weapon etc, and you can build your ship up into a formidable fighting craft. *Nemeses 3* is certainly the best available on an MSX 1.

Action is fast and furious, with enemy ships coming at you from all directions, this game is a real arm acher. There are hidden weapons on various levels, and these vary according to the type of ship you have chosen.

Graphics and sound? Colour, graphics and sprites are all first class. The only serious complaint is regarding the scrolling. It's no worse than the previous *Nemesis* titles, but that isn't saying much. Thankfully, there is so much happening on screen that this is soon forgotten.

Now as for the sound and music, unless you have an Amiga or Archimedes, you won't have heard better on a home computer. It's truly amazing to hear all the usual zaps and crashes while a great piece of music is playing in the background.

You may have guessed by now that I liked this game. *Wrong – I loved it!* Cartridge price is about £23.0 – and good value too. Definitely 9 out of 10.

Football poke

MSX 2 owner who find *Matchday 2* won't run can, try the following: POKE 65535,170. Keep sending in those tips folks.

Keith Neal

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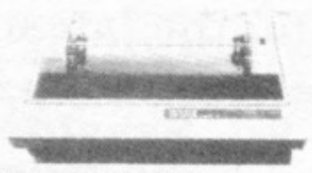

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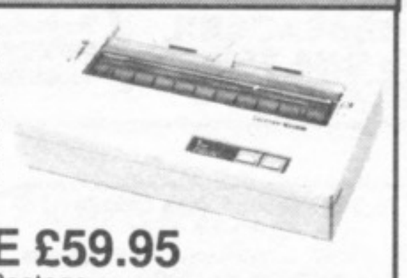

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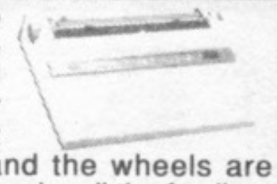

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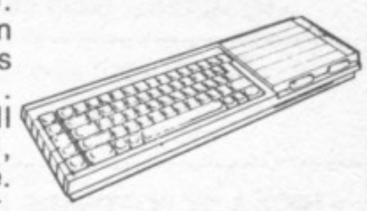

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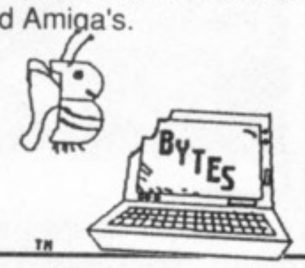

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Problems with your computer? Express's Agony column has the answer. Write in strictest confidence to Uncle Techtip.

Best tips win a freebie – so don't forget to tell us your address and machine

HELP!

Across the tracks

I am the proud owner of an excellent Atari 520STFM. As you know, the internal disk drive will format disks to 720K via the operating system. But using a program called *Acopy*, disks can be formatted up to 959K. Will using such disks formatted to 959K do the mechanics of the drive any harm?

P Bennet, Preston

• Although 3.5 inch drives are officially capable of writing to 80 tracks, they can usually access up to two more tracks. Lots of commercial software houses make use of this "undocumented" feature to protect their games etc, by placing the protection code in the extra tracks. Unfortunately, when Atari made a change in the specifications of the drives it was buying for the ST, many commercial software was rendered useless, as the new drives couldn't access the protection tracks and the games crashed. It is these extra tracks that many "big formatter" utilities take advantage of in order to expand the storage capacity of the floppy disk. If your drive handles the expanded storage capacity (i.e. reads and writes it) then there's no problem. Stop worrying and enjoy the increased capacity and reduced media costs.

HELP!

Portaloo

I am the proud owner (or unfortunate, depending on your point of view) owner of an Amstrad PPC512DD. (*What's this? The Techtippers insulting themselves now? Your Uncle's gonna be out of a job soon – Uncle TT*)

1. Is the green of the screen caused by a tinted piece of glass and if so is it possible to replace it with an untinted piece of glass so that the display will be of the easier to read LCD grey background like a calculator?

2. Can the existing screen be cleaned without leaving white or streaky marks all over it?

3.Is it possible to connect a proportional type joystick controller?

4. Why does the public domain program *Stargate* by Atari crash after three goes with an *error:faulty memory (parity error) and a loud beeping noise requiring removal of power to regain control? Is it the computer or the program? (All other programs seem to work OK)

5. Could you also tell me if it is possible to obtain a compiler to compile normal *GWBASIC* programs into .EXE files?

The most annoying feature of the PPC has got to be the screen, with its hard to locate cursor. A partial solution to the problem is the PD utility *cursor, which redefines the shape of the cursor. A solid block, obtained by *cursor 0, 13 is much easier to locate, especially when processing!

Simon Titterington, Leeds

• Have you noticed how other – slightly downmarket – publications would open a reply to a letter of this type with 'Phew! A bumper crop of questions there, Simon'? Just watch how Uncle TT does it...

Change the glass for untinted indeed! Are you serious?

1. Basically, no. What you can do, is to buy a little gizmo which will allow you to connect the Peep to an ordinary television set. The display is of a surprisingly good quality and the device is cheap (around £39). Call Vine Micros on 0304 812276.

2. Try using a little ball of cotton wool slightly moistened with a solvent such as methylated spirits.

3. Not unless you have a an expansion box which will facilitate the connection of a controller card. Without the card, you cannot connect a joystick. There are several propriety expansion boxes providing a couple of slots, but they're very costly. If you're interested, have a rummage in the ad section of our sister publication *PC Plus*.

4. How should I know?

5. I seem to remember through the dim mists of boring PD time the availability of a compiler for *GWBASIC*. Give the Public Domain Software Library a call on 0892 663298. If anyone can help, they can.

TIP

Beebulator

In answer to P. A. Capewell's question (*Express* 36) about the BBC emulator for the PC; as most of the school programs are written in *BBC BASIC* I suggest a look at the excellent *BBCBASIC 86 Plus* for IBM-PC and compatibles available from **M-Tec Computer Services UK, The Market Place, Reepham, Norfolk NR10 4JJ**. Tel: 0603 870620. It costs £79 plus VAT.

I have been using it for a few years now and rate it very highly. M-Tec can also supply comms leads to transfer files from the BBC to the IBM. VDU and '*' commands are supported, it has a full screen editor, can use 640K RAM and supports in-line 8086 assembler. There's also support for MDA, CGA, EGA, VGA and uses the BBC mode command.

M. Webb, Basildon, Essex

HELP!

Going loco

Why won't my Amstrad PCW9512 print on A5 paper on its very own daisywheel? I have spent a couple of hours this evening carefully following the instructions in the manual. It says it's using A5, to the extent of having this at the top of the screen, but then it prints to A4 size. It gives me 34 lines, but the same width as A4. And yes, I have specified 'portrait'. I don't get any error messages, it just prints to A4.

Vivien MacRae, Blackpool

• I assume you're using *Locoscript*. In this, you can set up a document to be A5 (in Document setup, [f1] from the editing menu) or, independently, the printer to print out in A5.

You've probably set up the document as A5 but as you try to print it out the printer is switched back to A4. Here's how to get around the problem. Whilst printing, a menu will appear saying "document and printer do not match" (i.e. one set up for A5 and t'other for A4). Select "change to paper intended for document" and everything should be OK. (Otherwise – dare I say it – try the excellent manual which comes with your machine).

HELP!

Powered up

I asked my mate which was the best computer to play games on and he said buy an Atari, so I bought an Atari 400. Unfortunately, it did not have a power supply with it. Do you know what its power requirements are? I hope you can help because I have the *Pacman* cartridge which I am dying to play!

Chris Williams, Gt. Horton, Bradford

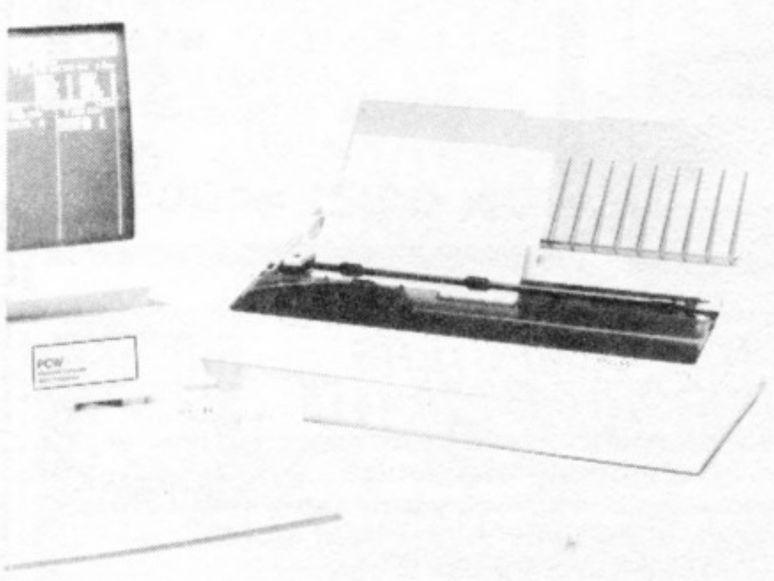
• Congratulations on a superlative purchase. You could make an attempt at constructing your own but probably the best course of action is to buy one – they're about £20-£30. Call Silica Shop on 01 580 4000.

HELP!

Second-hand land

The family computer is currently a Commodore 64 with which we use a Chinon Enhancer 2000 disk drive and a Star LC-10 printer. We do not have a monitor, just a colour TV.

The C64 has always been the kids' game machine until I recently started using it for word processing using *Mini Office II*. However, I find the word processor rather limited, being used to using a word processor called *Uniplex* at work, i.e. having to look up the control codes for bold printing rather than use



• Size doesn't count – at least as far as Vivien MacRae's 9512 printer is concerned...

BUG OF THE WEEK

MacWrite II, the long-awaited upgrade to that old stalwart word processor MacWrite on the Macintosh, possesses one additional feature over its predecessor – Macwrite II files can't be read by any known DTP packages – including the state-of-the-art *XPress*, by Quark.

MacWrite II was written by Quark...

Alec McFarlane, Arbroath

• Typolium invisibulus
This species is the latest mutation of the genus Typolium fossilus. Unique, in as much as its existence is universally denied by all leading entomologists

HELP!

A pain in the NEC

While at the Atari User Show a few weeks ago, I bought a new internal drive for my old-style Atari 520ST. I bought from the Power Computing stand and when I asked whether it was difficult to exchange my old drive for the new sort was told that the hardest thing would be to take the casing off. So gullible fool that I am I bought the drive (an NEC).

Eventually I got around to opening my trusty and beloved ST, which I found to be a task almost beyond me. I lifted the old drive up and found that it was attached to the rest of the machine by three leads.

The first lead was a black wire attached to the casing. The other two were fairly major sockets that plugged into the drive, one with four holes the other with ten. After a gentle struggle I pried off the two sockets and removed the old drive.

Problems. There was no outer shielding around the new drive and I couldn't remove the stuff from the other one. Then there was nowhere to attach the black wire. The smaller, four-holed, socket wouldn't fit on to the four-pin plug on the new drive due to plastic sticking out on both sides. I snapped off some of the plastic in an attempt to make it fit, but to no joy!

I then tried to fit the larger plug and socket together. Ha! That was joke. Not only was the plastic in the way again but the socket had only ten holes, the new drive had seventeen pins.

I fiddled for a while but no success was forthcoming. I refitted the old half-meg drive and was delighted when it still worked.

But that now means that I have an unused, unusable double-sided disk drive sitting in my room. Can you help me? Should I take it down to my local shop (Evesham Micros) and ask them to repair it or should I ask Power Computing for a refund?

Greg Harris, Evesham, Worcs

• Ask for a refund? You've completely ruined the connections to the drive!

If ever you find something doesn't fit, don't try to modify it yourself unless you really know what you're doing; ring the place you got it from and demand either a replacement or your money back.

You now have two choices. Leave the drive to gather dust or have it professionally repaired at Evesham or one of the many other repair centres around the country. The repair is reasonably simple and shouldn't cost too much (tell them *I* said so...)

the function keys. Also the TV screen means that I do not see what I'm going to get.

The question is, what do I spend my money on (when I've done enough car boot sales)? Should I go for buying a monitor and a better wp package which would give me the facilities I want, and could you recommend same?

My other alternative is to buy an Amiga 500 and explore the public domain for a good WP and other goodies (but then I couldn't afford a monitor).

The options are further complicated by a recent opportunity which has presented itself. My workplace will soon be in a position to offer some second-hand PCs with interest free loans. There will be a choice of IBM AT, XT28T and XT. Prices will be between £200 and £600 and will include suitable WP software. Can you tell me anything about these machines and their second-hand price? Would the kids be able to use one for playing games?

Diana Phillips, Kings Heath, Birmingham

• Forget the Commodore 64; it's limited and will never be able to match the professional software you use at work. My advice is to embrace the second-hand XT with open arms (and wallet). All the software you could ever want is available for this machine and there is an increasingly large amount of the latest games software being converted and released for PC/XTs. Buy it – you won't be disappointed.

TIP

Manual correction

Second-hand printers are often sold without manuals. I bought an Epson some time ago, and was able to get a copy of the manual by ringing them on 0800 289 622 (another Freephone number). They gave me the phone number for a distributor, who then told me the address of a local shop that could order a manual. It is well worth doing this, as it is very helpful when setting up the printer.

Vivien MacRae, Blackpool, Lancs

HELP!

PC'd off

I am now the owner (fortunate or otherwise) of an Olivetti PC1 and MS-DOS, PC compatible.

My query is about its expansion slots available via the expander box. Are they standard expansion slots?

The manual lists the differences between the slot on the side of the computer and true IBM-compatible slots. Are these fixed by the circuit in the expansion box or are these electronics purely for buffering?

Lastly, do you know of a user group for the *Prodest*? If not, I'd be interested to hear from other users with any help or information.

Peter Holt, Mount Vernon, Glasgow

• The expansion slots in the expander box are standard 8-bit IBM compatible expansion slots which will accept all 8-bit cards. I doubt the electronics might be "purely for buffering" (buffering what? The circuit and connector are physically different).

I know of no user group aimed specifically at the Ollie PC1, but you and the other guy who bought one may like to get together and contact the **PC User Group at PO Box 360, Harrow HA1 4LQ**. Tel:01 863 1191.

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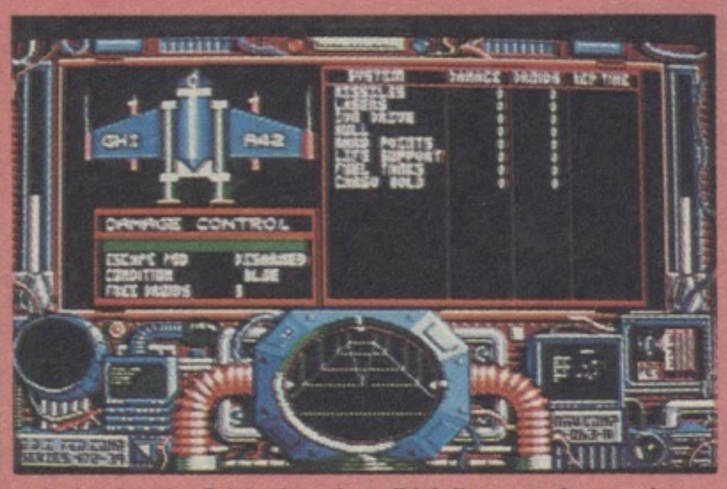
● Our reviews of *FOFT* and *Dominator* this week prove one man's meat is another mans poison – but variety *is* the spice of life. As for the rest, *Carrier Command* has finally slipped onto the Spectrum, and for once, it was worth the wait – Rainbird's *Starglider 2* is also due on the Spectrum soon. Talking of coming attractions, *Express* is launching a new concept in games coverage next week...

FEDERATION OF FREE TRADERS

Gremlin

Amiga £24.99dk. Also on ST

When the lads at Gremlin thought up the name *Federation of Free Traders* they probably hoped it would become synonymous with all that's good and great about gaming. Instead it conjures up images of delays, bugs and quite a few less than complimentary reviews. So is it all that bad?



• A pity that the finished product didn't live up to its promise

GAMEPLAY Stop me if you've heard this one before. You are in charge of a trading-cum-fighter ship cruising around a completely enormous galaxy buying and selling stuff and having the odd scrap. There are lots of interesting baddies flying around and a thick plot to keep enthusiasts buried in the manual for a few hours.

Players have to be prepared to spend a few light years getting to grips with it. The trading is tiresome and lacks challenge. It's also irritatingly time consuming.

Combat scenes are difficult and fiddly which wouldn't be such a bad thing if they were fun.

SOUND AND GRAPHICS It looks as if someone spent a year with *Elite* trying to make it better. In technical respects it succeeds with the graphics and sound slightly better than its older cousin.

OTHER VERSIONS Already established in ST land. All the horrid bugs and difficulties which marred the ST version have been ironed out but otherwise it's much the same.

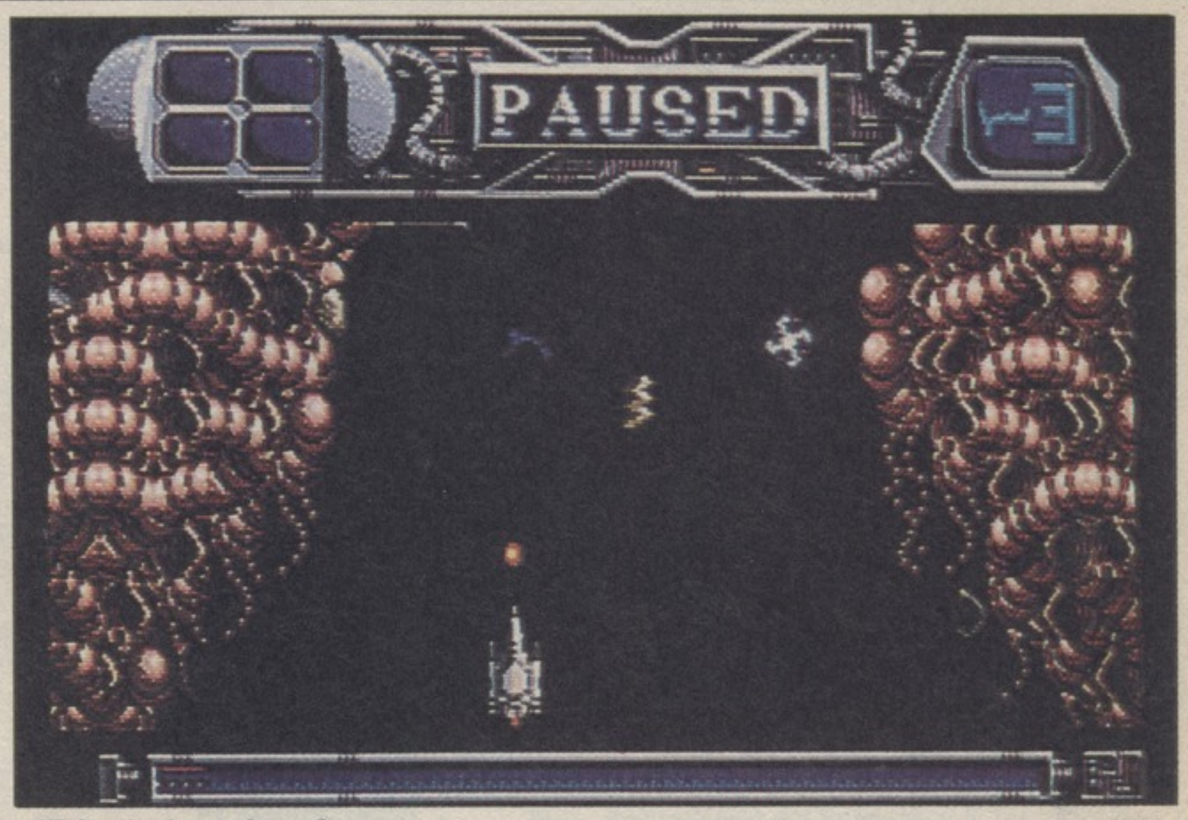
EXPRESS VERDICT Where *Elite* grabbed you by the throat and dragged you in *FOFT* simply prompts mild interest. It's for that small band of people who are prepared to give up the real world for a few months in order to explore some-one else's sci-fi fantasies. The whole affair takes a lot of time to understand and enjoy.

No, it's not as bad as some would have you believe. But they've got a point.

★ ★

Jon McCleary

DOMINATOR



• ST: Dominating on Stage One

System Three

Amiga £19.99dk

Also on ST, Spectrum, C64, CPC

***Dominator* is a multi-stage, multi-directional, shoot-'em-up...**

GAMEPLAY ...and not much else to say, except that it's slow, difficult to control and one of those games that throws you back to the start of a level when you lose a life.

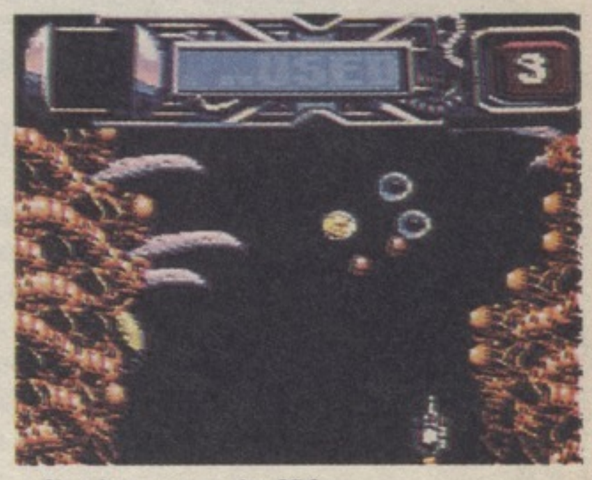
GRAPHICS AND SOUND The backdrops are well defined, atmospheric and colourful – but the sprites are small, puerile and devoid of any originality. The sound spot-effects are some of the most stale and uninspiring audio effects we've ever heard in a Amiga release.

OTHER VERSIONS C64 *Dominator* stands out from the rest, thanks to great audio-visuals and a fair degree of playability. The ST version is as bad as the Amiga. CPC *Dominator* is colourful but terribly slow, with the Spectrum version plainfully monochrome.

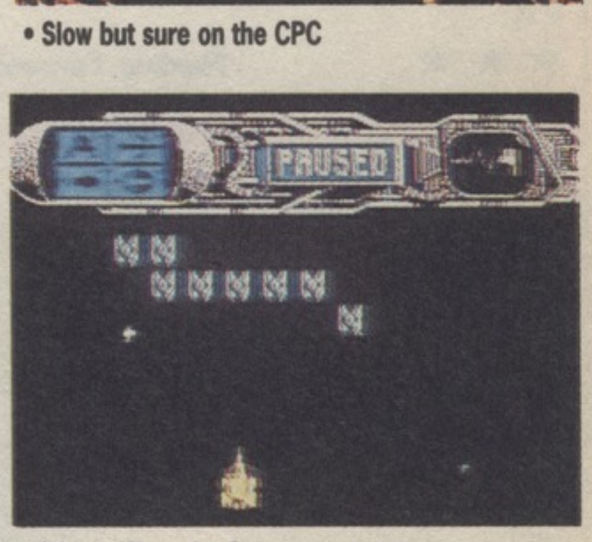
EXPRESS VERDICT What's happened to System Three – the software company that brought us the brilliant *Last Ninja* on the C64? Something's gone drastically wrong judging by its latest release. Sure the C64 game is quite a good shoot-'em-up – and easily the best of the bunch – but even this is surpassed by many C64 shoot-'em-ups already out on the market. Lets hope System Three regains its previous software skills with the release of Amiga *Last Ninja 2* in September...

★

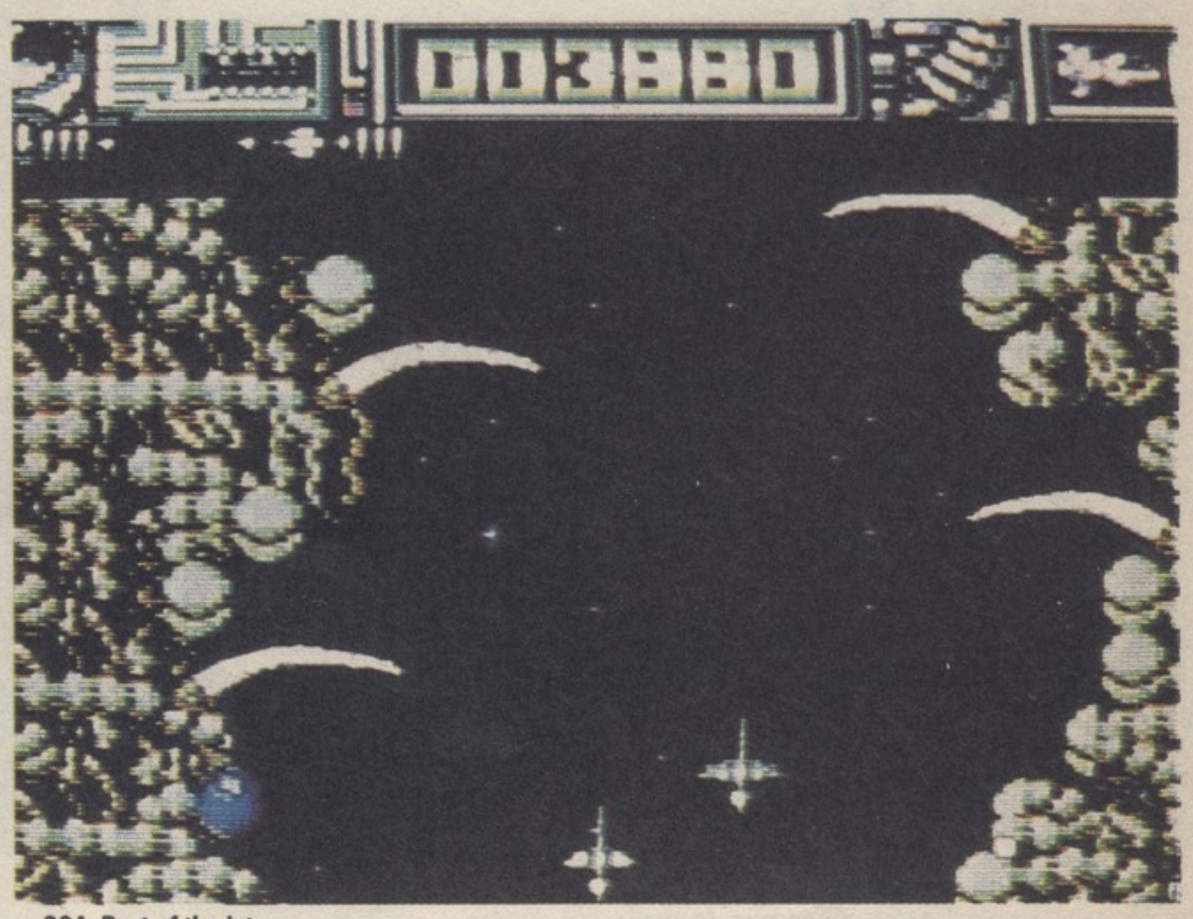
Rik Haynes



• Slow but sure on the CPC



• A blaze(?) on the Spectrum



• C64: Best of the lot

QUEST FOR THE TIME BIRD

Infogrames

ST £29.99dk. Also on Amiga, PC

Explore strange lands, avoid ghouls and make acquaintance with pneumatic-bosomed young chits in the exotic lands of Akbar...

GAMEPLAY On the eve of the god Ramor's ascension to ermine-mantelled monarchic majesty as ruler of Akbar, the old pretender himself is abducted and rendered prisoner of the fearsome conch shell. With only nine days to the "night of the changing seasons" – whereupon all efforts will come to nought – you must battle various ghoulish creatures, killing or negotiating with them in an attempt to release Ramor from his cephalopod-ish confines and restore him to true glory and the throne of the twin mooned world.

GRAPHICS AND SOUND The scenarios are well thought out and nicely drawn. Colourful, and quick to appear, they enhance the game and embellish your imagination.

Sound comprises digitised opening tunes, the constant scractching of crickets and plenty of atmospheric spot effects. You're made instantly aware of the large amount of effort put into the game.

OTHER VERSIONS We haven't seen the other versions yet.

EXPRESS VERDICT The whole adventure genre has petered out of late, but this flight of fancy should reverse that and thrill adventure fans to their little cotton socks.

★ ★ ★ **Fielding 'Farewell' Mellish**

• Cute but pricey

SPACECUTTER PLUS

Firebird

PC £24.99dk

Traverse the Lightsource 3-D system of shaded dross, waggle your ship, then step back clutching at your heart (and wallet) in the realisation that you've spent twenty five quid on one of the worst games this year...

GAMEPLAY Armed with missiles and chaff pods, your Meson-class spacecraft is bunged into an arbitary location in the Whirligig – a network of over four billion mini-universes (eigenspaces). The object of your mission is to attempt to capture the five perfect solids which exist somewhere within 33 million perfectspace sectors, by dragging them through stargates.

In the meantime, you must contend with 100 billion fighters, destroyers and interceptors baying for your blood. The scenario is directly analogous to the high street computer industry – 100 billion box shifters baying for your cash...

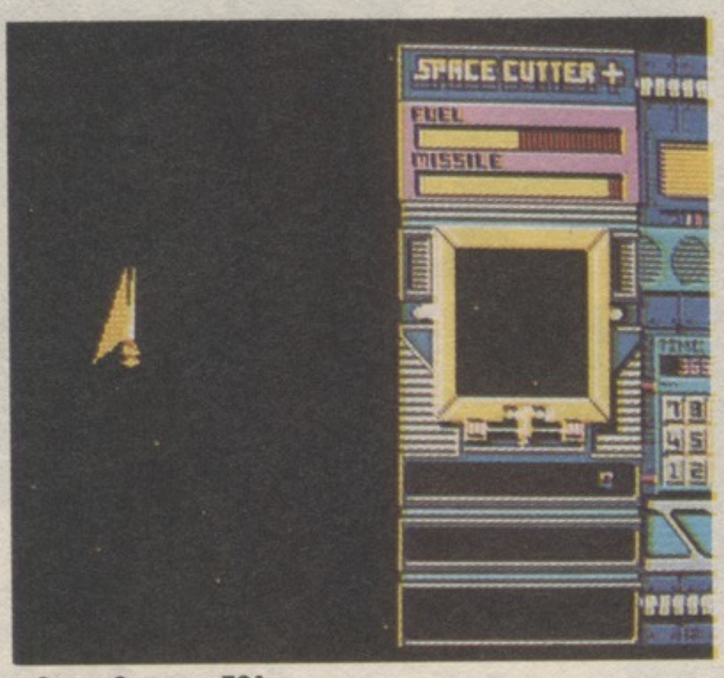
GRAPHICS AND SOUND The graphics are appalling. Truly awful. Dire. Sluggish responses to the joystick and indecipherable sprites painted in washed-out 'MOD-surplus' colours combine to make the display utterly forgettable.

Spacecutter features digitised speech which – although it must be hailed as a valiant attempt on the PC – will have your inner ears screaming for mercy. The rest of the spot effects were programmed – presumably – on a wet Wednesday afternoon, i.e. dreary.

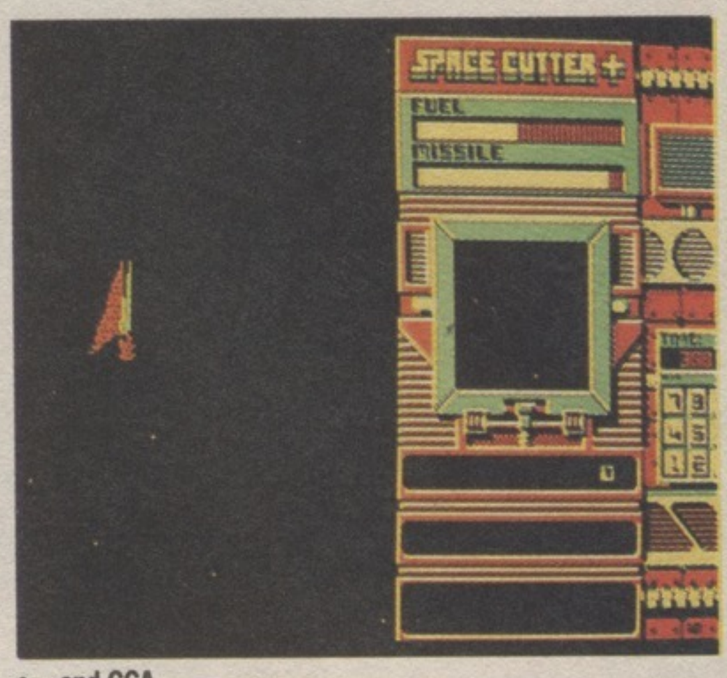
OTHER VERSIONS Out last year on ST and Amiga as *Whirligig*... nice visuals, shame about the lack of any gameplay.

EXPRESS VERDICT Unfortunately, the only expenditure of effort in the whole game is that which provided the spiel for the manual. The game's a dodo. Devoid of gameplay, it languishes in a veritable vat of hyperbole. The game manages one star thanks to the digitised speech.

★ **Fielding Mellish**



• Space Cutter on EGA...

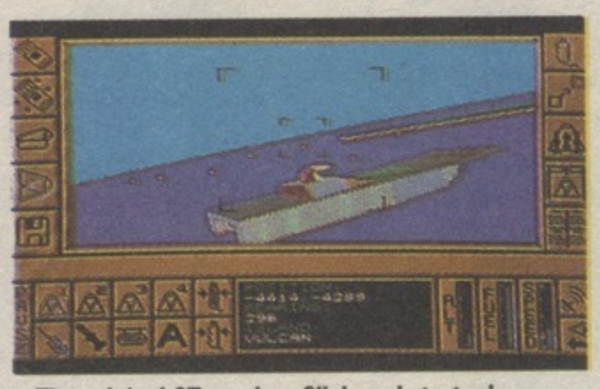


• ...and CGA

CARRIER COMMAND

Rainbird

Spectrum (128K only) £14.99cs, £17.99dk Also on C64, CPC, ST, Amiga, PC



• The original ST version: Slick and strategic

***Carrier Command* has finally made it to the Speccy from the ST and Amiga – has it been worth waiting 14 months?**

GAMEPLAY You take command of the ACC Epsilon, out to take control of a island colony rich in mineral wealth – this mineral deposit is vital for the survival of your nation.

The only problem is that your sister ship the ACC Omega is now under the control of the STANZA Organisation, and they are demanding a payment of 15 billion dollars in 72 hours (just dropped to 24 hours) or it will occupy or destroy all the islands. Nuclear confrontation has been ruled out because it might set off a volcano, so you only have advanced conventional weapons at your disposal. Your ship and outboard craft are controlled by a icon environment which is easy to use after 2 or 3 hours.

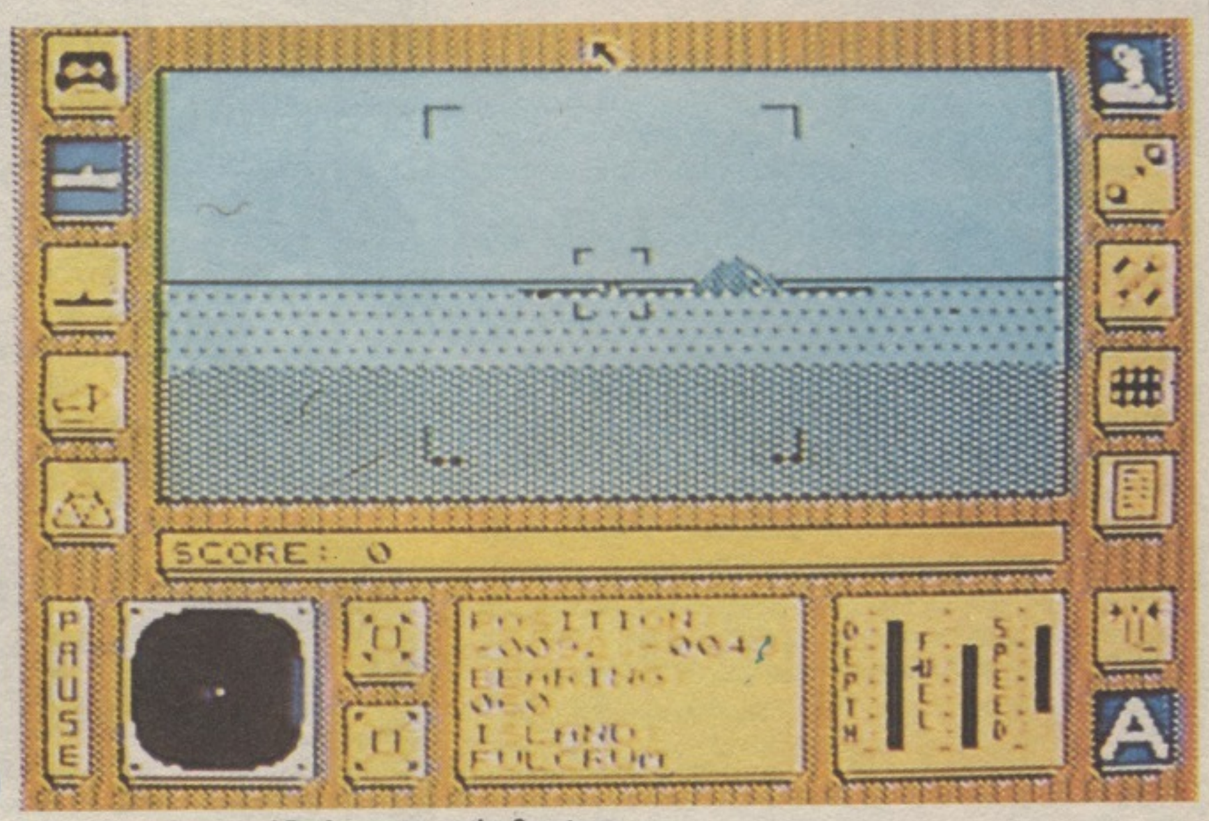
GRAPHICS AND SOUND Graphics are monochrome filled vector graphics, except for the two outboard craft which are not filled. Movement is fairly fast and smooth, and sound consists of spot effects which do the job efficiently.

OTHER VERSIONS The ST and Amiga have faster and more colourful graphics and a larger selection of icons. We haven't seen the CPC, PC or C64 versions yet.

EXPRESS VERDICT *Carrier Command* is the best of its type on the Spectrum and is almost as good as its 16-bit counterparts. Great game, but why do software companies keep giving away audio cassettes which only raise the packaging price and which only get listened to once?

★★★★★ **Jonathan Nurse**

5 GAME



• Carrying a Command Performance on the Spectrum

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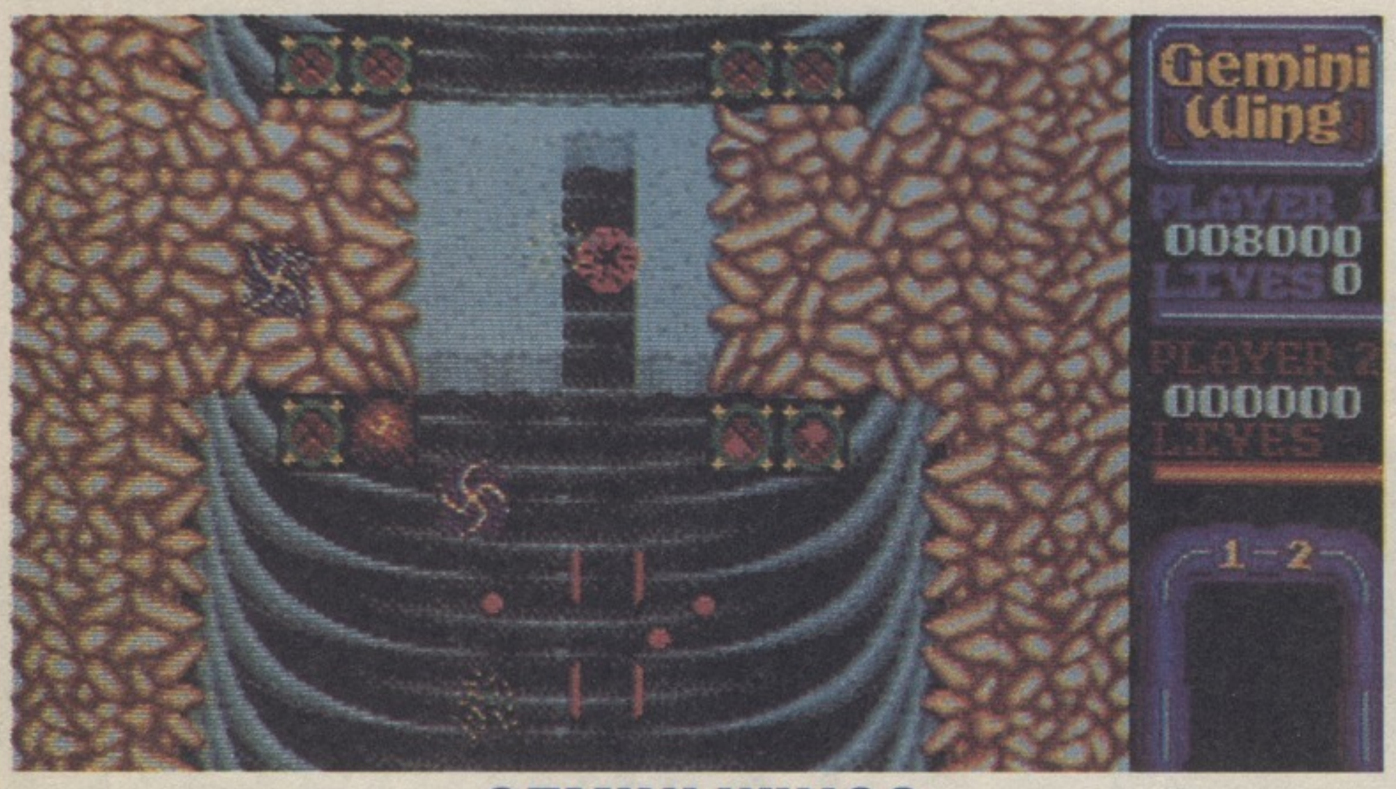
ON A WING AND A PRAYER

Rik Haynes takes six new releases under his wing as he steps into the fast lane...

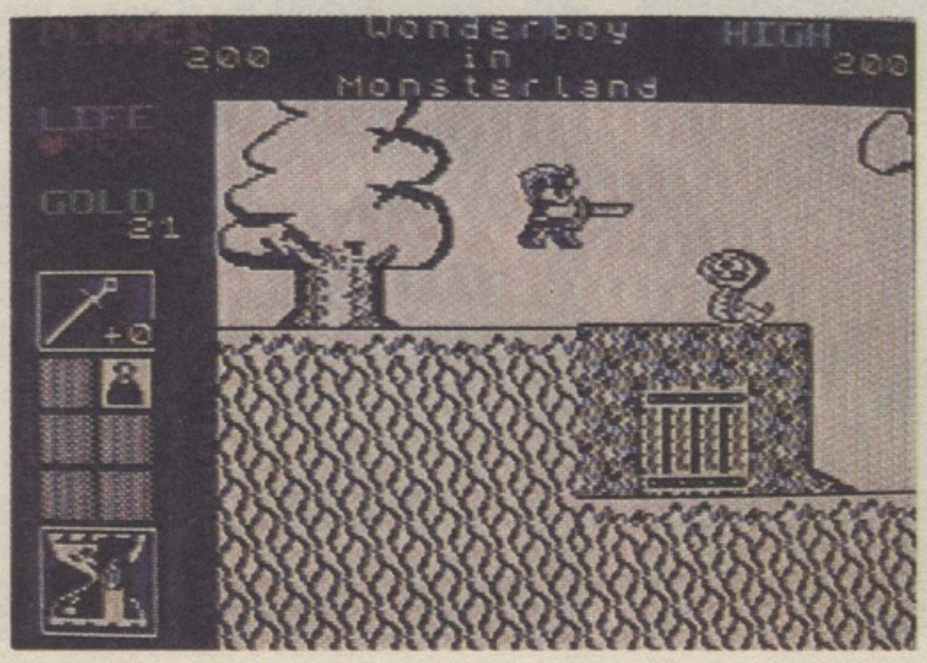


GEMINI WINGS
Virgin Games

Following on from its success with another Tecmo coin-op conversion, *Silk Worm*, Virgin Games is about to release *Gemini Wings* on Spectrum C64, CPC, ST and Amiga. It's a seven-level, simultaneous two-player, vertically-scrolling shoot-'em-up featuring the likes of mutated butterflies, ship-seeking snippers and giant salmon. Screen shots from the C64, CPC and Amiga versions.

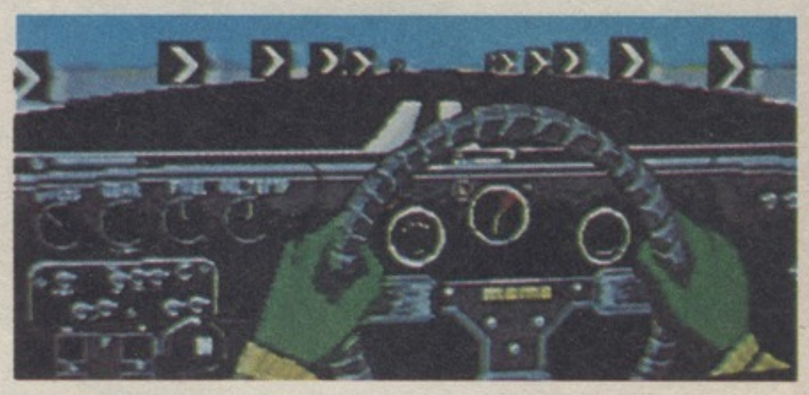
SUPER WONDERBOY
Activision

Super Wonderboy is the sequel to the cult Sega horizontally-scrolling platform arcade adventure coin-op, *Wonderboy*, with you again placed in the role of Tom-Tom, the baby-faced hero out to save the Wonderland from jellyfish, mudmen and vampire bats. Out in September on Spectrum, C64, CPC, ST and Amiga. Let's hope Activision does a better job of converting the coin-op this time!



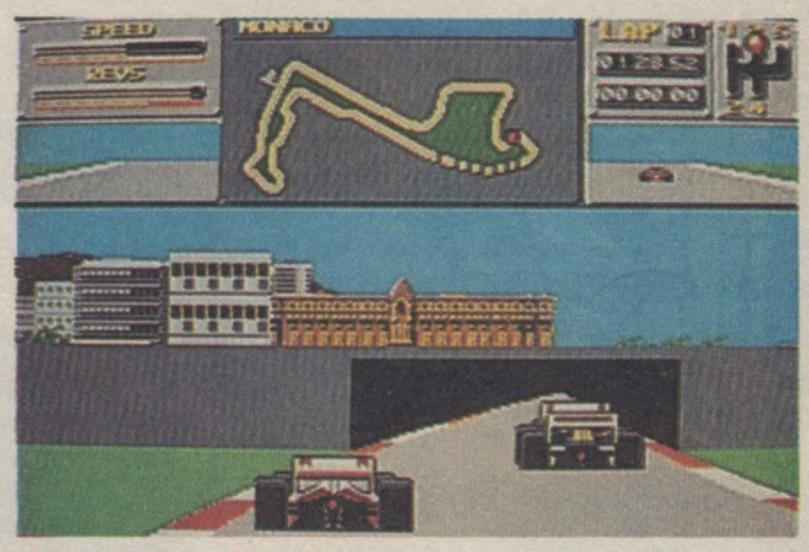
FAST LANE
Artronic

A tie-in licence with Spice Engineering – a firm in the real-life fast lane with a Cosworth Ford-powered SE89C turbonutter. You'll compete against top drivers around world-famous circuits in this race sim. You'll also have to contend with the hassles involved with keeping your car on the right track. Out on ST and Amiga in September.



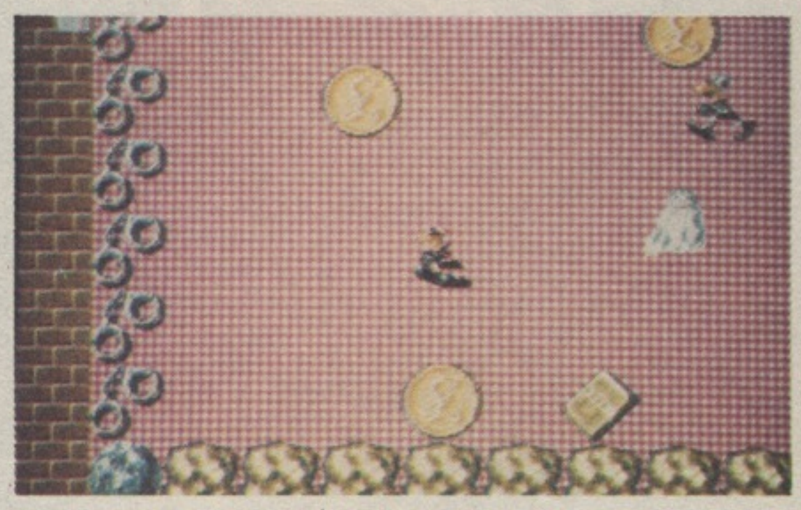
ATARI GRAND PRIX
Atari

Race-sim number two previewed this week, only this time it's on ST alone, as you race against top drivers around world famous tracks (deja-vu?) in a Formula One challenge. You can play against computer-controlled cars or another computer user via a datalink. Should be available as you read this.



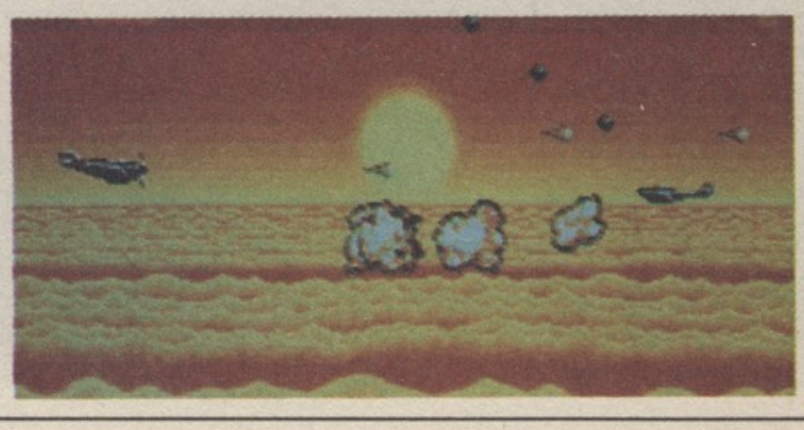
LEONARDO
Starbyte

Yet another game with "fast paced arcade action", *Leonardo* is from newish European software developer Starbyte, and looks as though it's a puzzle arcade release casting you as a petty thief out to steal everything in sight. Out soon on C64, ST, Amiga and PC.



P47
Microprose

P47 is a coin-op conversion of the strange horizontally-scrolling shoot-'em-up based around World War Two mecha, but with the abilities of 21st century weaponry! *P47* is due to be released in October on Spectrum, C64, CPC, ST, Amiga and PC.



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EXPRESS VOUCHERS

How the scheme works

- **The Express voucher is a special scheme to encourage you to buy New Computer Express regularly.**

- **It offers you savings of up to £10 when you buy goods through the magazine.**

- **The vouchers are not limited to specific items – you can save on any purchase from one of the participating advertisers.**

- **Most mail order advertisers in this magazine are taking part in the scheme – just look for this sign. →**

WE ACCEPT EXPRESS VOUCHERS

- **Remember. The use of just one voucher could more than recoup the price of the magazine.**

THE FIVE SIMPLE RULES

1. Express vouchers can be used to obtain discounts on purchases of goods advertised in this issue of *New Computer Express*, **provided** that they are bought directly from an advertiser taking part in the scheme. The vouchers are valid **only** for those advertisements which say *"We Accept Express Vouchers"*.

2. Each voucher entitles you to a discount at the voucher's face value, **provided** that your overall order level is **higher** than the figure indicated on the back of the voucher.

3. To use a voucher, simply enclose it with your discounted payment when you order. You may use **only one** voucher in any one order.

4. The order including the voucher must be received by the advertiser before the closing date printed on the voucher.

5. **You must** fill in the details requested on the voucher.

Evesham Micros

WE ACCEPT EXPRESS VOUCHERS

All prices include VAT and Delivery

ATARI

All our ST prices include mouse etc. plus 5 disks of software including First Word wordprocessor utilities, Neochrome graphics utility, game and demos

520 STFM POWER PACK

Amazing value, all-new special ST package from Atari! Includes 520STFM with 1MEG drive, joystick, mouse, user guide, 5 disks of public domain software, plus an incredible selection of chart-topping software worth over £500! Software included is:

R-Type, Afterburner, Double Dragon, Super Hangon, Space Harrier, Overlander, Pacmania, Starglider, Super Huey, Eliminator, Predator, Bombjack, Out Run, Bombuzal, Xenon, Gauntlet II, Black Lamp, Starray, Nebulus, Stargoose, First Music, First Basic, Organiser

All for only £359.00 Inc VAT & delivery

520 STFM SUPER SUPER PACK

Fantastic value! Includes 520 STFM with 1MEG drive, over £620 worth of software, joystick, mouse, User Guide and 5 disks of Public Domain Software. Software includes:

Starglider I & II, Carrier Command, Marble Madness, Beyond Ice Palace, Thundercats, Summer Olympiad, Arkanoid II, Eddie Edwards Ski, Ikari Warriors, Tracker, Flying Shark, Test Drive, Buggy Boy, Quadralien, Xenon, Wizball, Seconds Out, Zynaps, Virus, Sentinel, Chopper X, Ranarama, Starquake, Genesis, Black Lamp, Thrust, Organiser

Same price! only £319.00 Inc VAT & delivery

520 STFM with 1MEG internal drive fitted	£269.00
1040 STFM latest model, with built-in TV modulator	£399.00
1040 STFM Super Pack, includes 21 games plus joystick, and 'Organiser' business software as supplied by Atari	£419.00
1040 STFM Hyper Pack, including 'Hyper Paint', 'Hyper Draw', 'First BASIC', 'Organiser' plus £50 Atari Software Offer Voucher	£429.00
Buy a monochrome monitor with any 1040 from above for £110.00 extra	
Mega ST1 with mono monitor	£599.00
Mega ST2 with mono monitor	£849.00
SM124 mono monitor	£119.00
SC1224 colour monitor	£279.00
Philips 15" FST Teletext TV/monitor model 1185, full rem/ctrl, c/w cable	£269.00
Philips CM8833 14" colour monitor c/w ST or Amiga lead	£229.00
Philips 8CM852 as above, higher resolution (0.39mm dot pitch)	£259.00

commodore 64 accessories

Oceanic OC-118 64/128 disk drive for 64/128 with free GEOS software	£129.95
Oceanic OC-118 as above, with Freeze Machine cartridge	£149.95
Freeze Machine backup cartridge, with integral reset button	£ 28.95
LC-10 commodore 64/128 ready printer inc. 2 extra black ribbons free	£189.00
LC-10 7-colour version of above printer inc. 2 extra black ribbons	£239.00

Amiga & ST 3.5" Drives

- ★ Very Quiet
- ★ Slimline Styling
- ★ Fully Compatible
- ★ Top quality Citizen drive mechanism
- ★ On/Off switch for Amiga
- ★ External plug-in PSU for ST
- ★ Throughport for Amiga
- ★ 1Mb unformatted capacity

Fully compatible, high quality 3.5" external drives for the ST and Amiga

Amiga version only £74.95

Atari ST version only £79.95

Prices include VAT & delivery

Western Digital Filecards

Upgrading your PC to hard disk? Look no further, we offer the best prices on top quality hardcards. Thorough documentation supplied, low power consumption, with free XTree file management software and Speedread. For Amstrad PC1512/1640 users we supply hardcards tested and formatted, with our simple software installation procedure. The best packages available!

20MB...£199.00 32MB...£229.00 40MB...£289.00

DISECTOR ST V5

for all Atari ST models only £28.95

New Version 5 disk utilities for the ST, features include: **protected software backup**, incorporating **turbo nibbler**, a *very fast and powerful* copier, which uses all available drives & memory and includes 80 parameter options for handling a greater range of software; **drive B boot** allowing many programs to startup from drive B; **organiser accessory** providing many major disk management commands; **special formatters** giving *up to 25% extra* user storage per 3.5" disk and accelerating access speed by *up to 30%*; **fast backup version 2** copies standard disks speedily; **ramdisk accessory**; **undelete file**; PLUS much,much more!

3.5" disks

10...£11.95 in plastic case £13.95
25...£27.95 in 40 cap case £34.95
Fully guaranteed double sided media

5.25" disks

25...£13.95 in 50 cap box £22.95
in 100 cap box £24.95
Fully guaranteed double sided media

Amstrad PC1512/1640/2086

We offer a wide choice of Amstrad PCs with many upgrade options, including the very latest PC2086 range. For the hard disk option, check our 'Evesham Upgraded Models'. Only the best will do - so we normally upgrade by means of a Western Digital Filecard, which includes XTree and SpeedRead software; however on single drive 1512/1640 models we can offer internal installations at the same price (leaving more expansion room but no upgrade opportunity for a 2nd floppy drive). On-site service contracts are available on any PC1512/1640 model for only £39.00 inc.VAT. Prices in lighter type exclude VAT.

Free with 1512 models... Ability and 4 US Gold Games

	SD	DD	AMS H.D.	SD 20MEG	DD 20MEG	SD 32MEG	DD 32MEG
				EVESHAM UPGRADED MODELS			
MONO 1512	384.35 442.00	477.39 549.00	N/A N/A	567.39 641.00	650.44 748.00	563.48 671.00	676.52 778.00
COLOUR 1512	494.78 569.00	555.65 639.00	N/A N/A	667.83 768.00	728.70 838.00	693.91 798.00	754.78 868.00
MONO 1640	474.78 546.00	555.65 639.00	738.26 849.00	647.83 745.00	728.70 838.00	673.91 775.00	754.78 868.00
CGA (colour) 1640	581.74 669.00	651.30 749.00	825.22 949.00	754.78 868.00	824.35 948.00	780.87 898.00	850.43 978.00
EGA (ECD) 1640	677.39 779.00	738.26 849.00	938.26 1079.00	850.44 978.00	911.30 1048.00	876.52 1008.00	937.39 1078.00
2086 MONO	564.35 649.00	633.91 729.00	813.04 935.00	737.39 848.00	806.96 928.00	763.48 878.00	833.04 958.00
2086 CD	656.52 755.00	726.09 835.00	903.48 1039.00	829.56 954.00	899.13 1034.00	855.65 984.00	925.22 1064.00
2086 12" HRCD	746.96 859.00	813.04 935.00	995.65 1145.00	920.00 1058.00	986.09 1134.00	946.09 1088.00	1012.17 1164.00
2086 14" HRCD	833.91 959.00	903.48 1039.00	1086.09 1249.00	1006.96 1158.00	1076.52 1238.00	1033.04 1188.00	1102.61 1268.00

PC1512 special offer ..... Buy an Amstrad DMP3160 10" carriage 9pin printer with any PC1512 model for only £120.00 extra!

optional extras

1512 memory upgrade to 640K	£39.95	Enhancer 101 replacement keyboard	£74.95
Maths Co-processor 8087-2	£129.00	3.5" drive (720K) for SD models	£79.95
NEC V30 (8086 replacement)	£24.95	PC2000 series compatible 5.25" (360K) external drive	£100.00
Cipher CT1525 tape streamer	£319.00	Joystick & Controller Card self centering analog type	£34.95
Amstrad Modem Card V21/23	£99.00		
Amstrad MC2400 Modem Card	£199.00		

Amstrad PPCs

Low prices on all portable PCs - especially twin drive models

prices in brackets are excluding VAT

PPC512S	(£373.04) £429.00	PPC640S	(£477.39) £549.00
PPC512D	(£433.91) £499.00	PPC640D	(£546.96) £629.00

New low price *External* 3.5" floppy drive (720K) to suit *ANY* Amstrad 1512/1640 inc. DD and HD models! Uses no expansion slots £99.95

Central Point Software

For all your PC disk management requirements

PC Tools Deluxe Version 5... Other utilities may claim to 'do it all' but only PC Tools Deluxe is the complete disk utility package, providing a fast hard disk backup, the best undelete available, 100% safe formatting of floppy and hard disks, unformat, reliable disk caching, compress facility, in fact everything required to manage & protect your data at a sensible price..... **£49.95**

Copy II PC Version 5..... The most effective floppy disk backup utility of it's type. We always ship the latest version. Can also transfer many programs to hard disk and then run them without reference to floppy. Supports both 5.25" and 3.5" disk format. Don't be without it..... **£24.95**

Copy II Deluxe Option Board..... The ultimate solution to backing up copy-protected software using the hardware option. All the original features of the Option Board, including the most powerful backup copier product on the market, and can even transform any PC equipped with a 3.5" drive into a dual purpose IBM/Macintosh drive. Allows your PC to read and write to MAC data disks easily through DOS. Comes as an easy-to-fit short card..... **£84.95**

PRINTERS

All prices include VAT, delivery and cable

star

We use and recommend Star printers since they do offer an unbeatable combination of features, print quality, reliability and value. Make the sensible decision - get it right with a Star printer at our special, all in, prices.

Star LC10 best-selling 144/36cps printer, 4 NLQ fonts, inc.2 extra ribbons free	£189.00
Star LC10 7-colour version of above printer, inc.2 extra black ribbons	£239.00
Star LC24-10 feature-packed multifont 24 pin printer	£319.00
Star NB24-10 great value 24pin inc. cut sheet feeder + 2 extra ribbons	£499.00
Star NX-15 budget wide carriage printer	£329.00
Star NB24-15 wide carr.version of NB24-10 inc. cut sheet feeder	£649.00
NEC P2200 budget 24pin, great value 168/56 cps	£319.00
Amstrad DMP3160/3250DI good value 10" 9pin	£169.00
Panasonic KXP1081 reliable budget 10" printer 120/24 cps	£169.00
Panasonic KXP1180 super new 9pin with over 3400 typestyles, 11" carriage	£199.00
Panasonic KXP1124 great new sturdy 11" multifont 24pin printer	£319.00
Epson LX800 popular 10" 180/25 cps	£199.00
Epson LQ500 good 24pin printer 150/50 cps	£319.00
Citizen 120D good value 10" 120 cps	£139.00
Citizen HQP-45 wide carriage 24pin printer	£399.00

How to order

All prices VAT/delivery inclusive
Express courier delivery £5.00 extra

Send cheque, P.O. or ACCESS/VISA details
Phone with ACCESS/VISA details
Govt., educ. & PLC official orders welcome
All goods subject to availability E.&O.E.
Open to callers 6 days, 9.30-5.30
Telex: 333294 Fax: 0386 765354

Evesham Micros Ltd
63 Bridge Street
Evesham
Worcs WR11 4SF
Tel: 0386 765500

Also at: 1762 Pershore Rd., Cotteridge, Birmingham, B30 3BH Tel: 021 458 4564

EXPRESS LISTINGS!

Introducing the listings page with a difference – all of them are guaranteed not to work on your machine...

Ten sayings attributed to Alan Sugar

10 "Eight-bit, sixteen-bit, one-bit, who cares as long as it works"
20 "PanAm takes good care of you. Securicor cares. IBM says the customer is King. At Amstrad we just want your money".
30 "One day people will talk about 'amstrads' like they talk about 'hoovers' and 'biros'"
40 "I don't know the actual basics of electronics, how electrons flow and that sort of thing"
50 "It did not overheat, but because people believed it did, we fitted a fan"
Talking about the Amstrad PC
60 "We cannot allow our reputation as suppliers of reliable equipment to be damaged"
After promising to replace all hard disks on PC2286s and 2386s
70 "This (1988-9) is a disaster year for us"
Apologising to the City for Amstrad only making £75 million in six months
80 "All the accountants kept talking about PE ratios. I thought they meant Physical Education"
Just about the only interesting thing he said when he was on 'Wogan'
90 "I'd sell tactical nuclear weapons if that's what people wanted"
Attributed, but source uncertain
100 "Mr Sugar? Sorry, he's not in"
To an Express journalist

Ten games reviewing technical terms with their actual meanings

10 "Great graphics"
The PR girlie gave me a T-shirt
20 "Brilliant graphics"
The PR girlie gave me a T-shirt and a lunch
30 "Superlative graphics"
The PR girlie gave me a T-shirt, a lunch, and one
40 "OK if you like that sort of thing"
I didn't actually play the game because the PR girlie didn't buy me a T shirt or lunch
50 "Well worth considering"
I didn't actually play the game because I was too busy having lunch with the PR girlie
60 "Detailed and realistic"
Boring as hell
70 "Wargaming fans will love this one"
I hated it but I can't afford to lose the free lunches
80 "We've had a sneak preview..."
We've only seen a screenshot because half the program hasn't been written yet and the other half is bugged to hell
90 "Everyone will be going to their local shop to buy this one"
Everyone will be going to their mates and getting a pirate copy
100 "Well worth the money"
It's well worth the money we paid for our review copy, i.e. nothing at all

Ten machines that will be worth a lot of money on *Antiques Roadshow* in 2030 but which will never have a column in *Express*

10 Jupiter Ace
20 Adam
30 Memotech
40 ELAN Enterprise
50 Lynx
60 TI 44
70 TRS 80
80 MK 14
90 Einstein
100 Acorn Atom

Ten computing terms that would be used as the basis for double entendres in low-budget ITV sitcoms

10 poke
20 RAM
30 nybble
40 bit manipulation
50 surge protector
60 low-level language
70 hard failure
80 hand-held
90 fan-in
100 fat bits

Ten programming languages you'd never heard of and will never ever use

10 PISTOL
Portably Implemented STack Oriented Language
20 STOIC
STack Oriented Interactive Compiler
30 PILOT
Programmed Inquiry, Learning Or Teaching
40 PLANIT
Programming LANguage for Interactive Teaching
50 PLATO
Programmed Logic for Automatic Teaching Operations
60 SIMSCRIPT
SIMulation SCRIPTer
70 TURING
after Alan Turing
80 SNOBOL
StriNg Oriented symBOlic Language
90 STRESS
STRuctural Engineering System Solver
100 MUMPS
Massachussetts University Medical Programming System

• More Express listings coming soon. Want to contribute? Send yours to: Express Listings, 4 Queen St, Bath BA1 1EJ.

NEXT WEEK

Security guards

Viruses, computer hacking, corruption – how safe is your data?

The face fits

Revolutionary computer systems are helping the police with their enquiries

Integrated packages

What are the best buys in the all-in-one packages?

Competition

Win a Robocop video and player!

PLUS

Another sweltering collection of money-saving vouchers, letters, reviews, features, tech tips, games... and the very latest in news and comment on today's computer scene

On sale Thursday August 3rd

★ ★ ★ ★ ★

ORDER YOURS NOW!

Only 58p!

520ST-FM SUPER PACK

The Atari Super Pack is ideal for you if you want to get off to a flying start with the best in entertainment software. The Pack includes a 520ST-FM with ½Mb RAM, a built-in 1Mb disk drive, over £450 of top games and a joystick. If you buy the Super Pack at Silica Shop, we will add our own ST Starter Kit (worth over £200), Free Of Charge. Return the coupon for details.

£399
INCLUDING VAT

1Mb DISK DRIVE
£450 OF SOFTWARE

ARCADE GAMES

Arkanoid II	Imagine	£19.95
Beyond The Ice Palace	Elite	£19.95
Black Lamp	Firebird	£19.95
Buggy Boy	Elite	£19.95
Chopper X	Mastertronic	£9.99
Ikari Warriors	Elite	£14.95
Marble Madness	Electronic Arts	£24.95
Quadralien	Logotron	£19.95
Ranarama	Hewson Consultants	£19.95
Return To Genesis	Firebird	£19.95
Roadwars	Melbourne House	£19.95
Starquake	Mandarin	£19.95
Test Drive	Electronic Arts	£24.95
Thrust	Firebird	£9.95
Thundercats	Elite	£19.95
Wizball	Ocean	£19.95
Xenon	Melbourne House	£19.95
Zynaps	Hewson Consultants	£19.99

SPORTS SIMULATIONS

Eddie Edwards Super Ski	Elite	£19.95
Seconds Out	Tynesoft	£19.95
Summer Olympiad '88	Tynesoft	£19.95

PRODUCTIVITY SOFTWARE

Organiser	Triangle Publishing	£49.95

JOYSTICK

Atari CX40 Joystick	Atari Corp	£4.99

FREE ATARI BUNDLE VALUE: £458.97

With SM124 mono monitor: £498 INC VAT With SC1224 colour monitor: £698 INC VAT

1040ST-FM PROFESSIONAL PACK

NOW WITH TV MODULATOR

For the serious home user and the small business, we are pleased to announce a new package based around the 1040ST-FM. The 1040ST-FM has 1Mbyte RAM and a 1Mbyte built-in disk drive. In addition, the 1040ST-FM now comes with a TV modulator built-in. (The previously available 1040ST-F was designed for use with a monitor only and did not come with a modulator.) This modulator allows the 1040ST-F to be plugged directly into any domestic TV set, and comes complete with a lead to allow you to do so. The new 'Professional Pack' from Silica includes the new 1040ST-FM with modulator plus four high quality software packages including a spreadsheet, database, word processor and programming language. This 'Professional Pack' software will enable you to get straight down to business with your new computer. In addition to this software (worth £384.84), if you buy the Professional Pack from Silica Shop, you will also receive the Silica ST Starter Kit (worth over £200), Free Of Charge. Return the coupon for further information.

£499
INCLUDING VAT

With SM124 mono monitor: ..... £598 INC VAT
With SC1224 colour monitor: ... £798 INC VAT

ATARI 1040ST-FM	(Computer)	£499.99
VIP PROFESSIONAL	(Spreadsheet)	£149.95
MICROSOFT WRITE	(Word Processor)	£149.95
SUPERBASE PERSONAL	(Database)	£59.95
BASIC DISK & MANUAL	(Language)	£24.98

NORMAL RRP: £884.82
LESS DISCOUNT: -£385.82
PROFESSIONAL PACK PRICE: £499.00

2Mb & 4Mb MEGA ST

The MEGA ST computers are styled as as lightweight keyboard with a separate CPU, connected by a coiled telephone style cable. There are two versions of the MEGA ST, one with 2Mbytes of RAM and the other with 4Mbytes. Each version has a 1Mbyte double sided disk drive built-in to the CPU unit. The MEGA ST's do not come with modulator built-in and must therefore be used with a monitor. With every MEGA ST purchased, we will add the 'Professional Pack' software (worth £384.83) detailed above, plus the Silica ST Starter Kit (worth over £200) both Free Of Charge. Return the coupon for further details.

2Mb MEGA ST
£899 INC VAT
+mono monitor=£998
+colour monitor=£1198

4Mb MEGA ST
£1199 INC VAT
+mono monitor=£1298
+colour monitor=£1498

DTP PageStream £149 +VAT =£171.35

Desktop Publishing (DTP) is one of the fastest growing applications for personal computers. We are pleased to announce a powerful low cost package for the Atari ST called PageStream. PageStream costs only £149 (+VAT=£171.35) and, because it works with an Atari 1040ST and a Seikosha SP-180AI printer, you can be up and running with a complete system for less than £1000. Some of the features of PageStream are listed to the right. If you would like further information on this program, complete and return the coupon below, ticking the 'DTP' box in the corner.

* TEXT-FLOW AROUND GRAPHICS
* ROTATION OF TEXT & GRAPHICS
* SLANT OR TWIST ANY OBJECT
* POSTSCRIPT COMPATIBLE
* TAG FUNCTION
* AUTO/MANUAL KERNING & HYPHENATION
* GROUPING OF OBJECTS

DO YOU OWN AN ATARI ST?

If you already own an Atari ST computer and would like to be registered on our mailing list as an ST user, let us know. We will be pleased to send you copies of our price lists and newsletters FREE OF CHARGE as they become available. Complete the coupon and return it to our Sidcup branch and begin experiencing a specialist ST service that is second to none.

SILICA SHOP:

SIDCUP (& Mail Order) **01-309 1111**
1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX
OPEN: *MON-SAT 9am - 5.30pm* ***LATE NIGHT:*** *FRIDAY 9am - 7pm*

LONDON **01-580 4000**
52 Tottenham Court Road, London, W1P OBA
OPEN: *MON-SAT 9.30am - 6.00pm* ***LATE NIGHT:*** *NONE*

LONDON ..... **01-629 1234 ext 3914**
Selfridges (1st floor), Oxford Street, London, W1A 1AB
OPEN: *MON-SAT 9am - 6.00pm* ***LATE NIGHT:*** *THURSDAY 9am - 8pm*

ATARI ST

ST COMPUTERS

The range of Atari ST computers offers something for everyone. From the games enthusiast who wants the challenge of the very best in arcade action, to the businessman who wants to make financial forecasts or faultless presentations. The ST offers high quality graphics, sound and speed for the gamer, whilst providing a fast, user friendly and affordable solution to business. The ST is now firmly established in the home environment and boasts a wealth of users in education, local government, television, and a variety of different businesses. Software for the range stretches to cover applications as diverse as ENTERTAINMENT, ACCOUNTS, ART, COMMUNICATIONS, COMPUTER AIDED DESIGN, DATABASES, DESKTOP PUBLISHING, EDUCATION, MUSIC, PROGRAMMING, SPREADSHEETS, WORD PROCESSING and more. For a full list of the software available, as well as details of the ST range, complete and return the coupon below.

All prices correct at the time of going to press. E&OE.

520ST-FM EXPLORER PACK
WITH BUILT-IN 1Mb DISK DRIVE

The value for money offered by the Atari ST range is reflected in the Explorer Pack featuring the 520ST-FM computer with 512K RAM. The 520ST-FM computer now comes with a built-in 1 Mb double sided disk drive as well as a free mouse controller and a built-in TV modulator. The new 520ST-FM Explorer Pack includes the 520ST-FM computer, the arcade game Ranarama, a tutorial program and some useful desktop accessories. In addition, if you buy the Explorer Pack from Silica, we will give you the Silica ST Starter Kit worth over £200, FREE OF CHARGE. Return the coupon for details of our Starter Kit and of the full ST range.

£260
ONLY £2.51 PER WEEK
RETURN COUPON FOR DETAILS
+VAT= £299

+ SM124 mono monitor: £398 INC VAT + SC1224 colour monitor: £598 INC VAT

WHY SILICA SHOP?

Before you decide when to buy your new Atari ST computer, we suggest you consider very carefully WHERE you buy it. There are MANY companies who can offer you a computer, a few peripherals and the top ten selling titles. There are FEWER companies who can offer a wide range of products for your computer and expert advice and help when you need it. There is ONLY ONE company who can provide the largest range of Atari ST related products in the UK, a full time Atari ST specialist technical helpline and in-depth after sales support, including free newsletters and brochures delivered to your door for as long as you require after you purchase your computer. That one company is Silica Shop. We have been established in the home computer field for ten years with an annual turnover in excess of £8 million and can now claim to meet our customers requirements with an accuracy and understanding which is second to none. But don't just take our word for it. Complete and return the coupon below for our latest literature and begin to experience the Silica Shop specialist Atari service.

SILICA STARTER KIT: Worth over £200, FREE with every Atari ST computer bought from Silica.

PROFESSIONAL PACK: Free business software with 1040ST-FM and MEGA ST's bought from Silica.

DEDICATED SERVICING: 7 full-time Atari trained staff with years of experience on Atari servicing.

THE FULL STOCK RANGE: All of your Atari requirements from one place.

AFTER SALES SUPPORT: The staff at Silica are dedicated to help you get the best from your ST.

FREE CATALOGUES: Mailed direct to your home as soon as we print them, featuring offers as well as all of the new releases.

FREE OVERNIGHT DELIVERY: On all hardware orders shipped within the UK mainland.

PRICE MATCH PROMISE: We will match competitors on a 'same product same price' basis.

FREE TECHNICAL HELPLINE: Full time team of Atari technical experts always at your service.

FREE SILICA STARTER KIT WORTH OVER £200

WITH EVERY ST - RETURN COUPON FOR DETAILS
ALL PRICES QUOTED INCLUDE FREE UK DELIVERY

To: Slica Shop Ltd, Dept NCE 0789 _1-4 The Mews, Hatherley Road, Sidcup, Kent, DA14 4DX

PLEASE SEND FREE LITERATURE ON THE ATARI ST

Mr/Mrs/Ms: ..... Initials: ..... Surname: .....

Address: .....

.....

.....

..... Postcode: .....

Dept NCE 0789

Do you already own a computer
If so, which one do you own? .....

DTP ☐

FUN FROM DOWN UNDER THAT WILL HAVE YOU STANDING ON YOUR HEAD

TAITO

THE NEWZEALAND STORY

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Wally Walrus has captured his tea – 20 of Joey Kiwi's friends from the New Zealand zoo, and if Joey doesn't rescue them all by tea-time they'll be stuffed, served and swallowed at Wally's table. Joey has to search Wally's domain which is just how you would expect it to be – FAT with danger!

Armed only with a bow and arrow, Joey can accumulate more weapons along the way. Beware of the malicious rabbits, boomerang throwers, deadly frogs, blood-sucking bats and many, many more villainous creatures.

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